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A study of the relationship between dogmatism and ethos

Joseph Stephen Collins
University of the Pacific

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A STUDY OF THE RELATIONSHIP BETWEEN
DOGMATISM AND ETHOS

A Thesis
Presented to
the Faculty of the Department of Speech
University of the Pacific

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Joseph Stephen Collins
August 1962

This thesis is approved for recommendation
to the Graduate Council.

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Dated Aug 22 1962

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CHAPTER I

THE PROBLEM, THE LITERATURE, THE THEORETICAL BASES, AND DEFINITION OF TERMS

I. THE PROBLEM

William Brigrance in his Speech, Its Techniques and Disciplines in a Free Society reports the German psychologist Zillig's experiment wherein ten pupils were apparently selected at random, placed in front of their classmates, and asked to follow simple instructions, i.e., "Raise your right hand." The other members of the class were instructed to carefully judge each performing student on his ability to follow directions. In actuality, the selection of the ten students had been determined some weeks prior to the experiment when a secret vote had been conducted among members of the class to identify the "most liked" and "least liked" students. The ten pupils who were "selected at random" were in reality two groups, the five "most liked" and five "least liked" as identified by the votes of their classmates. Shortly before the experiment the five "most liked" students were instructed to behave exactly opposite to the instructions given. Thus when ordered to lift their right hands the five most popular students elevated their left hands while the "least liked" group followed the order correctly. A number of similar procedures followed and then the observing students

rated the performers on their direction following ability. Even though the five "most liked" students had been 100 per cent wrong in their actual behavior, "When class scores were totaled, it was found that the best liked students had been graded higher than the least liked."¹

Brigance introduces the discussion of this experiment as an analogy to the personality dynamics of the persuasive speech situation. If for a moment the analogy is made concrete, the performing students imagined to be ten speakers divided into two teams supporting opposing sides of an argument with the five "most liked" students using totally irrational proof in their argumentation, then the results of Zillig's experiment are easily explained in the terminology of rhetorical criticism. By virtue of their being the "most liked" students the ethos of the irrational team was so much greater than that of their opposition that, regardless of what they said, the remarks of the winning team were more worthy of belief than were those of the five "least liked" students.

Brigance concludes his presentation of Zillig's work with the pithy comment, "If I like you, you are right. If I don't like you, you are wrong!"²

¹William Norwood Brigance, Speech, Its Techniques and Disciplines in a Free Society (New York: Appleton-Century Crofts, Inc., 1952), p. 100.

²Ibid.

The Importance of Ethos

Though he possibly overstates for emphasis, Brigrance has well illustrated one of the beliefs concerning the nature of persuasion which has remained almost constant since the beginnings of rhetorical scholarship, that one of the major factors contributing to the persuasiveness of any speaker is the ethos of that speaker. In fact, it would seem that when forced to select the most important of the three forms of rhetorical proof, logical (logos), emotional (pathos), and personal (ethos) rhetoricians are inclined to grant primacy to ethos. Perhaps the first to state this belief was Aristotle.

The character (ethos) of the speaker is a cause of persuasion when the speech is so uttered as to make him worthy of belief; . . . It is not true, as some writers on the art maintain, that the probity of the speaker contributes nothing to his persuasiveness; on the contrary, we might almost affirm that his character (ethos) is the most potent of all means to persuasion.³

Aristotle is not alone in his estimate of the import of ethos. Though separated by nearly twenty-four centuries, Ewbank and Auer are very close to the Greek master in their estimate of the importance of the personal appeal of the speaker.

³Aristotle, The Rhetoric of Aristotle, trans. Lane Cooper (second edition; New York: Appleton-Century-Crofts, Inc., 1932), pp. 8-9.

We tend to accept ideas from those we like. The reverse of this statement is equally true: we tend to reject equally good ideas from those we dislike.⁴

Returning to a scholar of antiquity, it is interesting to note in Quintillian's two-fold description of the perfect orator the first requisite has nothing directly to do with the speaker's use of logical or emotional proofs, but is rather a description of the character of the man who uses these proofs. The orator is first "a good man" who secondly is "speaking well." Neither Quintillian's description nor rhetorician's emphasis upon ethos should be viewed as bemeaning to speaking skill, logos, or pathos, for both judgments seem almost dictated by two factors of the speech situation. First, as Mudd and Sillars point out, the nature of rhetorical proof tends to emphasize ethos.

However regrettable it may be, evidence and argument develop proof that is no more than probable, the fact cannot be avoided. It must be recognized, therefore, that much of the persuasion which a speaker effects is the result of his own influence as a person.⁵

Second, the speech situation involves human beings and all of their natural tendencies, and one of these inclinations

⁴Henry Lee Ewband and J. Jeffery Auer, Discussion and Debate Tools of a Democracy (New York: Appleton-Century-Crofts, Inc., 1951), p. 244.

⁵Charles S. Mudd and Malcolm O. Sillars, Speech Content and Communication (San Francisco: Chandler Publishing Company, 1962), p. 200.

is " . . . to accept as probably true statements made by persons whom they admire or respect . . .⁶ to reason from the image of the speaker to his ideas or conclusions."⁷

In summary, rhetoricians have recognized that the circumstances of the speech situation tend to highlight the speaker as a person and thus the personal impact (ethos) of the speaker can greatly influence the effect of his remarks upon the audience.

Purpose of the Study

Granting the importance of ethos, any study casting further light on this vital portion of rhetorical theory would be of value to the over-all knowledge of public address. The general purpose of the study to follow is to conduct such an investigation. More particularly the following pages will present an attempt to use the theory and method of contemporary personality research in an effort to more fully explain the nature and functioning of ethos in an actual speech situation. The remainder of this initial chapter will be given over to a review of rhetorical thought concerning ethos, an examination of five major contributions to the literature of personality theory (specifically that portion of personality

⁶Wayne C. Minnick, The Art of Persuasion (Boston: Houghton Mifflin Company, 1957), p. 112.

⁷Robert T. Oliver, H. P. Zelko, and P. D. Holtzman, Communicative Speech (New York: Holt, Rinehart and Wilson, 1962), p. 311.

theory dealing with the "authoritarian personality"), and a synthesis of these two fields of thought which will lead to the formulation of a hypothesis concerning the nature of ethos and its relation to personality.

Ethos, its Definition and Sources; the Difficulty of Location

Before reviewing rhetorician's attempts to isolate and describe the nature and sources of ethos, it would seem necessary to arrive at a general understanding of the term. For both the purposes of a review of rhetorical literature and the study to follow, ethos can best be seen as that portion of the speaker's character or personality which being revealed by the speaker and perceived by the audience both before and during the speaking situation effects the persuasiveness of that particular speaker.

Though of great importance and ease of general definition, perhaps no other factor in public address is so elusive as ethos. Scholars can apply the rules of logical analysis to the rational appeals used by a given speaker and arrive at an accurate appraisal of his use of reasoning. Likewise, scholars can engage in counting, categorizing, and describing the number and types of emotional appeals employed by a speaker. But, systems like these break down when applied to ethos. Logic is ultimately reduced to the basic processes of induction and deduction. Emotional appeals, though more evasive of analysis, can be evaluated in terms of the basic inherent

and learned vital needs of the audience. But, what are the ultimate sources of ethos?

As the definition above implies, one of these sources would be the character of the speaker. It is from this orientation that Aristotle begins his analysis of ethos. Ethos, in his view is determined by the speaker's revealed "intelligence, character, and good will."⁸ These three general features of the speaker's personality are felt by Aristotle to have their basis in the degree to which the speaker possesses nine virtues: justice, courage, magnificence, liberality, gentleness, temperance, magnanimity, wisdom, and prudence."⁹ This technique of describing the sources of ethical appeal by listing virtues and characteristics which if possessed by a speaker will tend to increase his ethos has been continued to the present day. To Aristotle's list, Cicero added "good nature . . ., piety . . ., and lack of avarice."¹⁰ Modern theorists have suggested further sources. Minnick includes "physical energy and tonus, self discipline,

⁸ Aristotle, op. cit., p. 92.

⁹ Ibid., p. 47.

¹⁰ Cicero, De Oratore Book II as quoted by Lester Thomnsen and A. Craig Baird, Speech Criticism, The Development of Standards for Rhetorical Appraisal (New York: The Ronald Press Company, 1948), p. 385.

confidence, poise, color, eccentricity and uniqueness . . ."¹¹
 while McBurney, O'Neill and Mills point to "preparation,
 intensity, flexibility, and directness."¹²

Beyond listing particular personal characteristics which contribute to a speaker's ethical appeal, rhetorical critics have also considered ethos as arising from proper audience adaptation. Plato, who was perhaps more concerned with the character of the orator than any other critic, made knowledge of how to cope with particular audiences central to his concept of the effective orator, admonishing his students that as a doctor's success is concomitant with his knowledge of men's bodies so, the orator's success hinges upon his knowledge of men's souls and the various types of speeches he should employ to lead the souls of various types of men.¹³ This principle has remained of fixed importance since Plato's time. Commenting upon Aristotle's restatement of Plato's concern for audience adaptation Thomnsen and Baird state, ". . . this pronouncement has almost become a rhetorical

¹¹Minnick, op. cit., pp. 113-17.

¹²James H. McBurney, James M. O'Neill, and Glen E. Mills, Argumentation and Debate Techniques of a Free Society (New York: The Macmillan Company, 1958), pp. 210-13.

¹³Plato, "Phaedrus," The Works of Plato, trans. Henry Cary (second edition; London: Henry G. Bohn, 1854), as quoted in Lester Thomnsen (ed.), Selected Readings in Rhetoric and Public Speaking (New York: The H. W. Wilson Company, 1942), pp. 30-31.

axiom . . . if he is to be effective the speaker must adjust both himself and his ideas to the audience . . ."¹⁴

An excellent example of two critics viewing ethos as established in part by audience adaptation is given by Thonnsen and Baird in a brief analysis of Daniel Webster's opening appeal in a murder case.

Webster, it will be noted, attempts to reflect the spirit of his good intentions and his high moral principles by disavowing any relish for criminal prosecutions, . . . by answering the jury of his disinclination to hurry the orderly processes of justice; . . . by indicating his reluctance to take part in the proceedings; . . . in the main . . . (the purpose of this passage) is to convey to the jury a favorable impression of the speaker's good-will and character.¹⁵

Yet, is it possible to speak with accuracy of a speaker's ethos as arising from a specific list of virtues which he may or may not possess, or to speak of ethos as being established by statements a speaker makes which are aimed at enhancing his character, sagacity, and goodwill in the eyes of a particular audience? These sources may represent part of the truth, but modern critics are inclined to view the source of ethos as a more general factor than either particular characteristics or audience adaptation.

. . . the speaker's personality traits tend to be sensed by the audience through the arguments, the facts, the feelings exhibited by the speaker, through the

¹⁴Thonnsen and Baird, op. cit., p. 360.

¹⁵Ibid., p. 389.

propositions he defends . . . in fact, through everything he does. Thus, the revelation of character is largely an unconscious process--something that the speaker cannot help doing--and, unless he is a consummate actor, the impression he transmits to the audience will reflect his character as it really is.¹⁶

McBurney, O'Neill, and Mills present an equally broad description of the determinates of ethos:

The ethos of the speaker is ultimately determined by the choices he makes--by the propositions he elects to defend, by the materials he uses, by his attitudes towards persons and things, by the emotions he displays, by the language he uses--indeed by all the factors which enter into the speech situation, all the cues or signs available to the listener for interpretation. The speaker is likely to succeed as an advocate to the degree that his listeners interpret these choices, cues, and signs to mean that he is a man of intelligence, character, and good will.¹⁷

In addition to emphasizing the indefinite and broad nature of the sources of ethos as they are found in the speaker, the two passages above serve to introduce a new area in which ethos is rooted. Minnick writes of the "impression he the speaker transmits to the audience." McBurney, O'Neill, and Mills speak of "all the cues or signs available to the listener for interpretation." In other words, as it operates in the speech situation, ethos actually has two general sources, the speaker and the audience. This fact is made even more clear in the following analysis by Oliver, Zelko, and Holtzman:

¹⁶ Minnick, op. cit., p. 121.

¹⁷ McBurney, O'Neill, and Mills, op. cit., p. 210.

Further he (the listener) is not really responding to the flesh-and-blood speaker before him. He is responding only to what he knows and learns about the speaker both prior to the speaking event and during it. Thus, the listener is responding to the speaker as he exists in the nervous system of the listener or as he is perceived by the listener. He is responding to his own image of the speaker.¹⁸

Granting that ethos is in part determined by audience members' perceptions of the speaker, the search for the sources of ethos should turn also to the discovery of the factors in the audience which contribute to a speaker's ethical appeal. Many such audience centered elements have been suggested. There are the obvious advantages given a speaker when the audience perceives that they share common goals, aspirations, and conditions with the speaker. There is the relationship which Ewbank and Auer consider when they speak of the audience "liking" the speaker (supra, p. 4). Another possibility is suggested by Oliver:

. . . any personality will prove most effectively persuasive when it most clearly adheres to the audience's pattern of expectation for leadership in that particular type of situation.¹⁹

McBurney, O'Neill, and Mills offer another explanation in suggesting that the fashion in which the audience perceives the speaker is effected by factors "which are rooted in basic attitudes and habits."²⁰

¹⁸ Oliver, Zelko, and Holtzman, op. cit., p. 312.

¹⁹ Ibid., p. 369.

²⁰ McBurney, O'Neill, and Mills, op. cit., pp. 208-09.

Whatever the cause(s) of all these conditions may be, it can be seen in summary that both classical and modern rhetoricians agree that a speaker's ethos will be determined by the extent to which the audience views him as a man of character, intelligence, and good will. (It does not seem unfair to equate these qualities to the requisites for leadership). However, there has been much discussion over what factors determine whether or not the speaker will fill this description. In the last analysis, it would appear that a speaker's succeeding or failing to meet these classic requirements will be determined by two factors: (1) the total range of choices he makes in projecting his image to the audience; and (2) the manner in which the audience member perceives the image projected by the speaker. Thus, the researcher searching for the sources of ethos as it operates in the speech situation should attempt to discover some element which will explain both these phenomena. For, if some single thing can account in large part for both the choices made by the speaker and the fashion in which the audience member perceives the speaker, that factor must be viewed as a major determinate of ethos.

As will be explained more fully later, it was the central hypothesis of the study to follow that personality structure is just such an element as is described in the previous paragraph.

II. THE THEORY AND LITERATURE OF AUTHORITARIANISM

Thus far, one of the theoretical bases for this study has been examined, namely the rhetorical concept of ethos. The second major body of thought from which this investigation drew is a recent development in psychology, personality theory. Before dealing with this field and its relationship to ethos, it would seem necessary to arrive at an understanding of the term "personality." Perhaps the most reasonable approach to this problem of definition would be that taken by Duns. "The writer will use 'personality' to indicate the 'tone' of the study to follow rather than attempt to be definitive about the term itself."²¹ This position is taken not in an effort to evade the responsibility of definition. It is an acknowledgment of the admitted ambiguity of the term. Duns establishes even at the time Cicero used the Latin root of our word personality, persona, it had at least four meanings. As further evidence of the vagueness of the term, Duns points out that one psychologist accumulated a list of fifty definitions of personality which are currently used in psychological literature.²²

The fifty definitions to which Duns refers indicate the breadth of current psychological considerations.

²¹Donald Duns, "A Study of the Relationship Between Dogmatism and Speech Behavior" (unpublished Doctoral dissertation, Northwestern University, Evanston, Illinois, 1961), p. 20.

²²Ibid.

However, this study is based on the one particular portion of personality research which has centered on the concept of "authoritarian personality." One of the first major works containing a definitive description of this personality type is A. H. Maslow's "The Authoritarian Character Structure."²³

"The Authoritarian Character Structure"

After long experience in clinical psychology, Maslow concluded that there was a definite personality "type" which was characterized by a "syndrome" of personality traits. He identified this "syndrome" as the "authoritarian character structure" and in his article described twenty qualities which he felt were conspicuous in an authoritarian personality. The most important of these features as they relate to this study are presented here as summarized by Duns:

1. A world view which portrays human beings as selfish, stupid, or evil and the world as generally threatening.
2. A "tendency towards hierarchy," or seeing others as either superior or inferior to oneself.
3. The "Generalization of superiority and inferiority," (in other words, the superior is superior in all things and the inferior is inferior in everything).
4. That the authoritarian individual is hostile and possesses a single scale of values such as wealth, power, etc.
5. That he identifies kindness with weakness.
6. That he has a tendency to "use" people.
7. He suffers from guilt feelings and complexes.²⁴

²³ A. H. Maslow, "The Authoritarian Character Structure," Journal of Social Psychology (55:401-11), May, 1943.

²⁴ Duns, op. cit., p. 23.

Two other characteristics observed by Maslow which were not seen as salient to Duns' investigation but bear relation to this study are: (1) the desire for power; and (2) a disposition to judge superiority by external standards.²⁵ It will be noticed that this basic analysis by Maslow contains characteristics of other works dealing with the concept of authoritarianism.

The Works of Erick Hoffer and Erich Fromm

Following Maslow, two works contributed greatly to the literature of authoritarianism, Erich Fromm's Escape From Freedom²⁶ and Erick Hoffer's The True Believer.²⁷ Though written from differing orientations--as a psychoanalyst Fromm is more concerned with the causes and immediate personal results of authoritarianism while Hoffer writing as a social philosopher is more concerned with its social manifestations, totalitarian mass movements--both works may be dealt with together.

In what seems a paradox, both Hoffer and Fromm believe freedom to be the cause of the authoritarian personality.

²⁵Ibid.

²⁶Erich Fromm, Escape From Freedom (New York: Holt, Rinehart, and Wilson, 1941).

²⁷Erick Hoffer, The True Believer (New York: The New American Library, 1961).

For in their view, freedom is a condition which involves unavoidable elements of insecurity, isolation, and anxiety. In the past, man was not free, but bound as he was to land, church, state, and an inflexible social order the individual's life was not an anxious one. The established institutions of the past gave every person a creed, social status, and perhaps poor but at least, stable position in his economic community. Modern society has changed all of this. Each man is no longer constrained by social, economic, political, and religious bondage. In a very real sense, he feels he is "captain of his soul," in control of his social position, political allegiance, and economic fate. Seen in this light, freedom is a tremendous burden. According to Hoffer and Fromm, when a person is faced by this "burden of freedom" and cannot bear it he begins to manifest a series of symptoms. An undefined anxiety begins to dominate his life and he views the world as threatening. He develops the "tendency to give up the independence of . . . his . . . own individual self and to fuse with somebody or something outside of . . . himself in order to acquire the strength which the individual self is lacking;"²⁸ a "striving for submission and dominance" becomes part of his motivational pattern and, he indulges in "the self torture of self accusation, compulsive behavior,

²⁸Fromm, op. cit., p. 141.

self punishment, cruelty toward others, desire for power, and the desire to dominate and be dominated."²⁹ Faced with this situation, which has arisen from the conditions of freedom, the individual can maintain his sanity only by escaping in some fashion from his freedom. According to Hoffer's and Fromm's thesis, he can accomplish this by becoming part of an autocratic political or religious movement for in submitting to the creed and total authority of this group a person, in effect, "escapes from his freedom" by becoming a "true believer" in some "holy" cause. He has, in Duns' words, gotten rid of "the burden of freedom by piling it onto the shoulders of someone else, stronger and wiser than himself."³⁰

What is of particular importance to the theory of authoritarianism is that in two apparently independent studies, Hoffer and Fromm have described two "personality structures" which are both quite similar to each other and much like the "authoritarian character structure" described by Maslow. Beyond this general contribution to the investigation of authoritarianism, Hoffer makes two observations which are of particular importance to the study to follow. First, the "authority figures" selected by the "true believer" are individuals who, in personality, are quite similar to the

²⁹Duns, op. cit., p. 34.

³⁰Ibid., p. 29.

"true believer" himself.³¹ Second, the movement to which the "true believer" surrenders his freedom is, in Hoffer's opinion, unimportant: the insecure man has a need to fill and the way it is filled is an accident of history. In other words, a fanatic is a fanatic by virtue of his personality: he is a fanatic communist by virtue of his Russian birth. This point, that the personality needs are primary and the creed which fills these needs secondary, was well illustrated by Hitler's remark "The petit bourgeois Social Democrat and trade-union boss will never make a National Socialist, but the Communist always will."³²

"The Authoritarian Personality"

It will be noticed that each of the three works above is descriptive and somewhat speculative in nature. The next landmark in the study of authoritarianism,³³ "The Authoritarian Personality,"³⁴ goes beyond description and speculation and enters the realm of measurement. Begun as an investigation of anti-semitism, the authors soon sensed that this particular

³¹Hoffer, op. cit., pp. 103-11.

³²Herman Rausching, Hitler Speaks (New York: G. P. Putnam's Sons, 1940), p. 134. Quoted from Hoffer, op. cit., p. 25.

³³Duns, op. cit., p. 24.

³⁴T. W. Adorno et. al., The Authoritarian Personality (New York: Harper and Brothers, 1950).

prejudice is only a single element in an entire personality "syndrome," and as a result of this discovery, the final work covers a vast range of areas of social conflict with the central focus resting on the "potentially fascistic or authoritarian personality." The first part of the study is given over to transcripts of a pair of interviews conducted with individuals of known degrees of anti-semitism. It was from these and similar sessions that the authors, Adorno Frenkel-Brunswik, Levinson, and Sanford, began to detect the general anti-minority, ingroup-outgroup "syndrome" which they identified as "ethnocentrism." Working from the results of these interviews and the literature of prejudice the California investigators, as they were called, designed two questionnaires, the "A-S" (for anti-semitism) scale and the "E" (for ethnocentrism) scale. The first of these two measuring devices is devised to "tap" the specifically anti-semitic attitude of the respondents and consist of a series of statements concerning Jews and Jewish "characteristics." The subjects indicate the degree to which they agree or disagree with each scale item. As the instrument is designed, the greater the subjects total agreement score the more he is considered anti-semitic. Two examples from the "A-S" scale are as follows:

3. It would hurt the business of a large concern if it had too many Jewish employees.

8. The Jew's first loyalty is to Jewry rather than to his country.³⁵

The second or "ethnocentrism scale" was designed to achieve two ends; first, to test the ingroup-outgroup prejudices of various minority group members and second, to attempt to measure the general ethnocentrism of which anti-semitism seemed just a part. The following are three examples from this scale. Each example is drawn from one of the three "subscales" (Negro, "minority," and "patriotism")³⁶ which combine to form the total test:

- 34. Most Negroes would become officious, overbearing, and disagreeable if not kept in their place.
- 15. One main difficulty with allowing the entire population to participate fully in governmental affairs (voting, jobs, etc.) is that such a large percentage is innately deficient and incapable.
- 7. There will always be superior and inferior nations in the world and, in the interests of all concerned, it is best that the superior be in control of world affairs.³⁷

It will be recalled that the California investigators suspected that anti-semitism was any one factor in a total ethnocentric "syndrome." High statistical correlations

³⁵Ibid., pp. 69-70.

³⁶These "subscales" represent three attitudes which seemed most common to interview subjects who were judged to be ethnocentric. For an extensive analysis of the entire ethnocentrism scale, see Ibid., pp. 102-50.

³⁷Ibid., pp. 105-06, 108.

between the results of the "A-S" and "E" scales tended to confirm this hypothesis. Thus, the next contribution by Adorno and his colleagues was the "F" (for fascism) scale. This measure was contrived to gauge the deeper personality factors which the authors believe to be the roots of anti-semitism, ethnocentrism and other "anti-democratic tendencies." The items for the "F" scale were drawn from analysis of results of the "A-S" and "E" scales, additional hypothesis are supplied by further interviews and review of literature dealing with prejudice. In this fashion, the final version of the "F" scale was composed of items intended to measure a group of variables which research indicated would be present in a "potentially fascistic" or "authoritarian personality." It is interesting to note how closely these variables described below compare to the features of the authoritarian personality as described by Maslow, Fromm, and Hoffer:³⁸

- a. Conventionalism - rigid adherence to convention, middle-class values.
- b. Authoritarian Submission - submissive, uncritical attitude toward idealized moral authorities of the ingroup.
- c. Authoritarian Aggression - tendency to be on the lookout for and to condemn, reject, and punish people who violate conventional values.
- d. Anti-intraception - opposition to the subjective, the imaginative, the tender-minded.
- e. Superstition and Stereotype - the belief in mystical determinants of the individual's fate; the disposition to think in rigid categories.

³⁸ This similarity is to be expected as Adorno et. al. draw much of their theory from Maslow and Fromm.

- f. Power and "Toughness" - preoccupation with dominance - submissive, strong - weak, leader - follower dimension; identification with power figures . . . exaggerated assertion of strength and toughness.
- g. Destructiveness and Cynicism - generalized hostility, vilification of the human.
- h. Projectivity - the disposition to believe that wild and dangerous things go on in the world; the projection outwards of unconscious emotional impulses.
- i. Sex - exaggerated concern with sexual "goings-on."³⁹

As a measure of general authoritarianism, the "F" scale was only a partial success. The chief criticisms of the device will be presented later. However, the scale is a "reliable measure of facism, ethnocentrism, and other forms of prejudice,"⁴⁰ and in over-all contribution to the study of authoritarianism, The Authoritarian Personality must rank as a landmark. If for no other reasons, it broadened the theoretical basis, provided a method of measurement for later studies in the field, and gave even further evidence of the existence of a specific and identifiable "type" of personality, which can best be described as "authoritarian."

Two contentions presented by Adorno and his collaborators serve as the basis for two major criticisms⁴¹ of

³⁹Ibid., p. 228. ⁴⁰Duns, op. cit., p. 35.

⁴¹There have been many criticisms of the Adorno work. The two included here were selected because they were considered most important to the Duns study which links the study of personality structure to the study of speech. For the most extensive analysis of the methods and findings of The Authoritarian Personality, the reader is referred to Richard Christie and Marie Jahoda (eds.), Studies in the Limit and Scope of "The Authoritarian Personality" (Glencoe, Illinois: The Free Press, 1954).

The Authoritarian Personality. The first of these is the California investigators' belief that authoritarianism is evidenced by a "syndrome" of specific beliefs which can be generally classified as politically conservative. Edward Schils raises the objection that the "F" scale tends to classify all authoritarians as members of the political "right" and tends to be insensitive to the authoritarianism of the far "left."⁴², ⁴³, and ⁴⁴

Second, Adorno et. al. hold that ethnocentrism, anti-semitism, political conservatism and other "anti-democratic" traits are all portions of a single personality syndrome. According to the criticism presented by Hyman and Sheatsley, this is not necessarily so. Their view is that the results obtained from correlations among the several "scales" may not point to a "syndrome" which includes all of the "anti-democratic" traits. The argument and evidence presented by these critics indicates that the high correlations are really

⁴²Edward A. Schils, "Authoritarianism 'Right' and 'Left,'" in Christie and Jahoda, op. cit., pp. 34-39.

⁴³In defense of The Authoritarian Personality, it should be noted that Adorno et. al. were most concerned with potential fascism rather than general authoritarianism.

⁴⁴It should be noticed that Schils' criticism would tend to confirm Hoffer's belief that as a personality trait, authoritarianism should exist independent of any specific ideology.

the result of a central authoritarianism which is "tapped" by the content and wording similarity of the questionnaires.⁴⁵

"The Open and Closed Mind"

The discussion of the above two criticisms leads to the consideration of a final work dealing entirely with authoritarianism, Milton Rokeach's The Open and Closed Mind.⁴⁶ Though its methodology is similar (though not as diversified) to The Authoritarian Personality, Rokeach's study is theoretically more akin to those of Maslow, Hoffer, and Fromm. Unlike the Adorno studies, Rokeach attempts to present a general theory of personality which will account for all manifestations of belief, not only those of "ethnocentrism," "fascism," and "anti-semitism." The Open and Closed Mind can thus be viewed as a return to a search for a general authoritarianism. Still, there is a central difference between Rokeach's work and all of the research reported above. Beginning with Maslow, these works concentrated their efforts upon describing a factor, authoritarianism, which might or might not be present in varying degrees in any personality; Rokeach, on the other hand, attempts to isolate a factor

⁴⁵Herbert H. Hyman and Paul B. Sheatsley, "The Authoritarian Personality--A Methodological Critique," in Christie and Jahoda, op. cit., pp. 50-132.

⁴⁶Milton Rokeach, The Open and Closed Mind (New York: Basic Books, Inc., 1960).

central to every personality, something which determines personality not by its existence but by its degree or condition.

Rokeach approaches the problem of authoritarianism in a fashion differing from those of the earlier mentioned authorities in that he attempts a systematic description of personality and explains authoritarianism, or to use his work "dogmatism" in terms of this general personality construct.

In Rokeach's view, each personality is characterized by a particular belief-disbelief system, a "psychological system" which contains everything believed or disbelieved by each personality.

The belief system is conceived to represent all the beliefs, sets, expectancies, or hypotheses, conscious or unconscious that a person at a given time accepts as true of the world he lives in. The disbelief system is composed of a series of subsystems, rather than merely a single one and contains all the disbeliefs, sets, expectancies conscious or unconscious, that to one degree or another, a person at a given time rejects as false.⁴⁷

Of particular note here is the conception of the disbelief system as other than a mirror image of the belief system. The disbelief system contains a number of "subsystems" which can be viewed as a continuum ranging from disbeliefs of greatest similarity to the belief system to

⁴⁷Ibid., p. 33.

those which are very different from the things contained in the belief system. Hence, the belief system of a Communist accepts one group of political beliefs as true and good and rejects to varying degrees as false and bad a series of disbelief "subsystems," Socialism, Democracy, Monarchy, and Fascism.

This division into beliefs and disbeliefs is characteristic of the approach by which Rokeach explains personality, for he views the central feature of his personality "construct," the belief-disbelief system, as being comprised of three divisions or "dimensions," "belief-disbelief," "central peripheral," and "time perspective."

Belief-disbelief dimension. One of the main features of the belief-disbelief dimension has been described above, the conception of a single system of beliefs and a series of disbelief subsystems. Taken collectively, these two systems comprise the total thought-set-expectancy content of any personality. Beyond this basic segmentation into beliefs and disbeliefs, Rokeach hypothesizes three other properties of the belief-disbelief dimension. These three, which are found to varying degrees in any system, are: (1) Isolation which refers to the extent to which an individual's beliefs form a logically consistent system; (2) Differentiation which refers to the articulation or richness of detail which characterizes a given system--how much an individual knows about the things

he believes and disbelieves; and (3) Comprehensiveness--narrowness which refers to the range of the subsystems represented in a disbelief system--how much a person discriminates between those groups who disagree with him.

Central peripheral dimension. The second major dimension of the belief-disbelief system is referred to as the central peripheral dimension, which is conceived as existing in three layers organized along a central-peripheral dimension.

(1) The central region: As each person goes through life, his contacts with the outer world and his inner self create a group of beliefs which are unstated and rarely questioned but are of vital importance to his personality. These beliefs concern the essential nature of the world about him, the people who populate that world, and his own self. As such, they are central to the manner in which each person views and deals with the world which confronts him.

It is obvious that beliefs concerning the essential nature of the world and the self will have an important impact upon personality and its central factor, the belief-disbelief system. Rokeach holds that the entire belief-disbelief structure emerges from certain central beliefs, namely, estimates of the "friendliness" of the world and the believer's potency or capability of dealing with the world he observes. The importance of these central beliefs to the

over-all system will be seen in an examination of the other two "layers" of the central-peripheral dimension.

Arising from the content of the central region is the intermediate layer which contains beliefs concerning the nature and selection of authority. Since the vast majority of information used in everyday life is supplied by authority, the beliefs of the intermediate layer are of great importance. If the individual's central region is characterized by a belief in a threatening world and self inadequacy, he will exercise great care in the selection of authorities for many of those competing for his attention may themselves be part of or, at least, unwitting agents of this threat. In addition, since he is personally impotent, the authorities he selects will be his means of combating an unfriendly world. In these circumstances authorities will be few and absolute. Notice that in this layer, Rokeach is not describing which particular authorities an individual selects, he is concerned with attitudes which can apply to any authority.

Rokeach includes another set of beliefs in the intermediate region, beliefs about people in general. This concept is of great importance to this study.

We suspect that the world of people is generally evaluated according to the authorities and belief systems they line up with. In other words, we have beliefs about people-who-have-beliefs. When authority is seen to be absolute, for example, it also leads to extreme cognitive distinctions between persons as faithful and unfaithful, orthodox and heretical, loyal

and subversive, American and un-American, and friend and enemy . . . The connection just drawn is considered by us as important because it spotlights a possibly intimate connection between the way we accept people and reject people and the way we accept and reject ideas stemming from authority.⁴⁸

Rokeach summarizes the three layers of the central-peripheral dimension in the following terms:

. . . It is necessary to conceive of three layers organized along a central-peripheral dimension: (1) A central region represents . . . the person's "primitive" beliefs. These refer to all the beliefs a person has acquired about the nature of the physical world he lives in, in the nature of the "self" and the "generalized other;" (2) an intermediate region represents the beliefs a person has in and about authority . . . on whom he depends to help him form a picture of the world he lives in; (3) a peripheral region represents the beliefs derived from authority, such beliefs filling in the details of his world map.⁴⁹

The time perspective dimension. This area is concerned with how an individual views the past, present, and future and the relationship he draws between the three. Broadness and narrowness are the important variants of the time perspective dimension. A broad time perspective would be one in which past, present, and future are all represented in a balanced and related fashion. A person who "fixates" on either the past, present or future would possess a narrow time perspective.

The peripheral dimension. The peripheral dimension contains all those specific beliefs which have their origin

⁴⁸Ibid., p. 45. ⁴⁹Ibid., p. 46.

in authority. For example, affirmative or negative beliefs about such things as birth control, socialized medicine, and the theory of history would be considered peripheral beliefs as they are derivable from the formal content of one's beliefs about the Catholic Church, the A.M.A., and Marx. However, it is not the content of the peripheral area that is important to the nature of the belief-disbelief system. The important factor is the relationship between these beliefs as they exist within a single system. If a person arrives at most of his peripheral beliefs by examining information from many sources then there is, very likely, "communication" between these beliefs--he is inclined to accept or reject a new idea because it corresponds or conflicts with pre-existing beliefs. He is also prepared to discard old beliefs when new ones make his old thoughts logically inconsistent with the truth as he now sees it.

This, then, is a brief description of the belief-disbelief system as it is seen through an examination of its three dimensions: Belief disbelief, central-peripheral, and time perspective. Many of the characteristics of the open and closed system have been suggested above. The following is an attempt to make these suggestions more explicit. The method employed will be to describe only the closed extreme with the understanding that the open mind will possess characteristics opposite to those of the closed system. The

reader should be able to imagine the infinity of degrees of openness or closedness which lie between the two poles.

The belief-disbelief dimension of the closed mind will have a few strongly held beliefs and a few isolated, poorly differentiated, but strongly rejected disbelief subsystems. For example, the ardent member of the John Birch Society adheres strongly to a primitive version of Capitalism and Republicanism and rejects almost any other economic or political system as either Socialistic, Communistic or Democratic. (Even these three terms seem to represent the same thing to the John Birch member.)⁵⁰

In the central-peripheral dimension, the closed mind is characterized by central beliefs which view the world as threatening and the individual as powerless. These beliefs, as explained earlier, lead to intermediate beliefs which hold a few authorities to be absolute and judge other people according to the way they react to the selected authorities or support "false" authority figures. The zealot almost always views the world as composed of a few "enlightened" fighting against the hordes of the heathen. The structure of the peripheral region of the closed mind finds peripheral beliefs in closer "communication" with authority than with each other. The resulting isolation can be seen in the

⁵⁰ See Robert Welch, The Blue Book of the John Birch Society (Belmont, Massachusetts: The Belmont Press, 1959).

fashion in which some political thinkers claim they support both complete laissez faire and high protective tariffs.

Finally, the closed mind is seen as having a relatively narrow, future oriented time perspective. The obvious example here being the communist's demand for a present "dictatorship of the proletariat" in order to secure the far distant classless state.

In addition to the view of personality as determined by the structure of the belief disbelief, Rokeach provides two additional contributions to the study of authoritarianism: (1) the "Dogmatism Scale"⁵¹ and (2) experimental, analytical and historical evidence that the organization of individual belief-disbelief systems strongly influences such diverse behavior as problem solving,⁵² prejudice,⁵³ and selection of associates.⁵⁴

This latter connection is of special importance to the study to follow. After careful analysis of dogmatism scale results from various religious and political groups and study

⁵¹The "Dogmatism Scale" will be discussed in detail in the next chapter. Briefly, it is a forty item questionnaire similar in form but not content to the "F Scale."

⁵²For a detailed account of the experiments which led to this conclusion, see Rokeach, op. cit., pp. 171-242. This section offers evidence that the "open minded" individual is superior and faster in problem solving which involves the use of new systems of thought and action.

⁵³Ibid., pp. 132-70. ⁵⁴Ibid., pp. 109-31 and 312-34.

of movements of membership between these associations,

Rokeach reports:

We generally seem to prefer, to one degree or another, those with belief systems that are more congruent with our own.⁵⁵

The work of C. E. Izard serves to confirm this contention. Izard compared the personality scale scores of friends and pairs of individuals who were matched by chance.

"Friends," writes Izard, "were significantly more alike than non-friends."⁵⁶

Summary of the Literature of Authoritarianism

The five studies just discussed all tend to confirm the existence of a well defined authoritarian or dogmatic personality structure. In general, the authoritarian or dogmatist is observed to have a dim view of himself and others and to view the world as threatening. He tends to compulsive behavior characterized by rigidity and drives for dominance and submission, self accusation, masochism, and sadism. In his relations to other men, the authoritarian is inclined to project his own subconscious drives into the behavior of others. He accepts those who seem to be like himself without question and rejects all people who seem

⁵⁵Ibid., p. 391.

⁵⁶C. E. Izard, "Personality Structure and Friendship," American Psychologist (14:366), July, 1959.

"different." In this rejection, the authoritarian-dogmatist is prone to lump all rejected into one poorly discriminated group ignoring the great differences among them. One further social manifestation is observed in the authoritarian's proclivity for association with other authoritarians. Finally, the authoritarian is extremely dependent upon a small, highly select group of authority figures which he accepts as the final and absolute arbiters of his beliefs and actions.

With the exception of Adorno et. al., the investigators all feel that the authoritarian is not characterized by any particular ideology; as a general personality structure authoritarianism-dogmatism is more revealing of how an individual believes the things he holds true and how he is inclined to behave in the world which surrounds him.

Seen in this light, the theory of authoritarianism and its openminded opposite is not an attempt to describe a particular neurosis, it is an effort to explain the whole personality of any individual and as such provides a basis from which it should be possible to investigate all aspects of human behavior.

Authoritarianism and Speech Behavior; The Duns Study

Duns' "Study of the Relationship Between Dogmatism and Speech Behavior"⁵⁷ can be considered as an attempt to partially validate the contention that personality structure is a major factor in the determination of human behavior. This investigation was conducted to evaluate the general hypothesis that if personality structure dictates general human behavior, it must affect speech behavior.

To evaluate this hypothesis, the Rokeach "Dogmatism Scale" was administered to a group of prospective communicators. From this population, speakers were selected on the basis of having scored in the two extreme quartiles of the population's test scores. These speakers then delivered extemporaneous oral communications to an audience which included a group of judges who had knowledge of the Rokeach personality theory. These judges, having no prior knowledge of the speakers' dogmatism scores, attempted to identify each communicator in terms of dogmatism. Duns predicted that personality structure would effect speech behavior to an extent that the judges could correctly approximate the dogmatism of the performing speakers.⁵⁸ After analysis of

⁵⁷Donald Duns, "A Study of the Relationship Between Dogmatism and Speech Behavior" (unpublished Doctoral dissertation, Northwestern University, Evanston, Illinois, 1961).

⁵⁸Ibid., p. 3.

rating data from the judges observations of actual speeches and examination speech manuscripts, Duns concludes:

With all the evidence taken together, there is ample proof that it is possible for judges familiar with the components of dogmatism to identify and classify speakers according to the scores they received on a dogmatism questionnaire.⁵⁹

Though Duns is careful to indicate certain limitations to the application of his findings, the results of his study do indicate that speech behavior is determined by personality structure as it is measured by the "Dogmatism Scale."

Personality Theory and Ethos Synthesized; Statement of Central Hypothesis

It will be recalled that at the close of the discussion of ethos (supra, pp. 2-18), the argument was advanced that in the final analysis, two interacting elements determine the extent to which a speaker will be received as a man of character, intelligence, and good will: (1) the total range of choices made by the speaker; and (2) what kind of man the individual audience member perceives the speaker to be. At the close of this analysis, the argument was presented that if a central factor could be discovered which would account for both the speaker's choices and the audience member's manner of perceiving the speaker, this factor could be viewed

⁵⁹Ibid., p. 143.

as a major determinate and explanation of the character and operation of ethos.

Two areas of evidence presented in the discussion of literature relating to authoritarianism indicate that personality structure may be just such a central factor. (1) The confirmation of Duns' hypothesis tends to establish personality structure as a major influence on speech behavior, and thus, on the choices made by the speaker. Hence, the speaker brings to any speech situation a personality structure which will determine the manner in which he will speak. (2) Each of the five works on authoritarianism considered above (supra, pp. 13-34) contains strong statements to the effect that the general manner in which an individual perceives others is determined by his personality structure (supra, pp. 17-18, 21-22, 33, and 34). In other words, the audience member brings to the speech situation a personality structure which will govern his perception of the speaker.

If these contentions are true, personality does determine the two interesting components of ethos, the speaker's choices and the audience member's perception of the speaker. However, the question yet remains, how does personality structure account for the degree to which the audience member judges the speaker to be a man of intelligence, character, and good will?

The answer to this question is suggested by a further synthesis of the theories of ethos and the social manifestations of personality structure. Included in the discussion

of ethos was a section concerning the features which, if perceived in the personality of the speaker, would tend to enhance his ethos, among these were: that the speaker is the type of person who is "liked" by the perceiver, that the speaker's personality corresponds to the basic habits and attitudes of the hearer, and that the speaker's personality conforms to the listener's "leadership expectations" (supra, pp. 10-11). Thus, if personality structure could account for the interaction between individuals which results in the formation of friendships, the selection of leaders, and similarity of basic habits and attitudes, then in addition to determining the speaker's choices and the general fashion in which audience members will perceive the speaker, personality structure could account for the factors which tend to establish the degree of ethos possessed by a speaker. Indeed, the general observations of Fromm and Hoffer plus the statistical evidence upon which Rokeach and Izard base their conclusions indicate that people form friendships, associate with particular groups, and select leaders because of similarity of basic habits and attitudes; in other words, congruity of personality structure. (Supra, pp. 17-18, 21-22, 33, and 34.

Central hypothesis. If three of the main constituents of ethos are the degree of similarity of basic habits and attitudes between speaker and listener, the tendency for

audience members to "like" or "dislike" the speaker, and the extent to which the speaker meets the "leadership expectations" of the listener; and if congruity of personality structure is similarity of basic habits and attitudes and accounts for the formation of friendships and the selection of leaders; then the following relationship between personality structure and ethos may be presented as the central hypothesis of the study to follow.

Ethos will increase and decrease to the extent that the speaker's and audience member's personality structures are similar or dissimilar.

Summary. Ethos has long been considered one of the major factors determining the persuasiveness of any speaker. A review of the rhetorical theories of ethos suggest that the ultimate sources of the speaker's personal appeal lie in the choices made by the speaker and the fashion in which the audience perceives the speaker. A similar review of the literature dealing with the authoritarian-dogmatic personality structure indicates that both the choices made by the speaker and the manner in which audience members will perceive the speaker will be determined by personality structure. Further analysis of both the theory of ethos and that of personality structure leads to the hypothesis that in the final analysis, ethos may be accounted for by the degree to which the speaker's and listener's personality structures are congruent.

CHAPTER II

CONTROLS AND MEASUREMENT

I. EXPERIMENTAL HYPOTHESIS

The methodology selected for testing the central hypothesis of this investigation was almost dictated by the subject under investigation. To discover if ethos is determined in large part by the interaction of personality structure as described in the previous chapter, it is necessary to create a quasi-experimental speech situation in which this theory can be evaluated.

Once this general approach was outlined, the central hypothesis was restated in a form which was considered more suitable for experimental evaluation.

In a debate in which the two competitors are equal in all major variables excepting personality structure, audience members will tend to be persuaded by the speaker whose personality structure is most similar to their own.

II. CRITERIA FOR STUDY

Thus, the central methodological problem involved in appraising the influence of personality structure upon persuasion was the creation of a persuasive situation in which the major variable effecting audience judgments would be the interaction of speaker and audience member personalities. In order to achieve this end, six criteria were

established for the two debates which were to supply the data for this investigation.

(1) An accurate measure should be obtained of the personality structures of all participating speakers and audience members.

(2) The debates should be between speakers of widely differing personality structures but equal speaking ability.

(3) The question for debate should be of such a nature that no "topic bias" would color the judgments made by audience members.

(4) The supporting materials available to the speakers should be of equal persuasive value, and represent a wide range of support types from which the debaters could draw to provide the proof for their speeches.

(5) In actual presentation, the speeches should be of equivalent persuasiveness.

(6) An accurate measure of audience reactions to the speakers should be obtained.

The remainder of this chapter shall be given over to a description of the methods used to achieve the controls called for by the above criteria.

III. THE 'DOGMATISM SCALE'

The Rokeach "Dogmatism Scale" was selected as personality structure measure for use in this investigation.

The major consideration upon which led to this choice was that the results of the Duns study¹ indicated a strong relationship between personality structure as measured by the Rokeach scale and speech behavior.

General description. The 'Dogmatism Scale' is a Likert-type questionnaire. The instrument contains a series of statements and the respondent's score depends upon the degree to which he tends to agree or disagree with items of the scale.

Rokeach gives this description of the theory and methodology which produced the Dogmatism Scale:

. . . Our procedure in constructing the Dogmatism Scale was essentially deductive. We scrutinized the various differing characteristics of open and closed systems. We then attempted to construct statements designed to tap these characteristics. Our assumption was that if a person strongly agrees with such statements it would indicate that he possesses one extreme of that particular characteristic being tapped, and if he strongly disagrees that he possesses the opposite extreme.²

Working from this basis, Rokeach and his co-workers created eighty-six test items. The final, or form "E" Dogmatism Scale consisted of the forty most "discriminating"

¹Donald Duns, "A Study of the Relationship Between Dogmatism and Speech Behavior" (unpublished Doctoral dissertation, Northwestern University, Evanston, Illinois, 1961).

²Milton Rokeach, The Open and Closed Mind (New York: Basic Books, Inc., 1960), p. 72.

of the original eighty-six statements. It was this form which was used to measure the personality structures--belief-disbelief systems--of the listeners and speakers involved in this study.

Reliability and validity. Central to the consideration of any measuring instrument are questions of reliability and validity. Internal consistency and stability provide the prime measures of reliability in the Rokeach investigations. Further evaluation of reliability will be presented in the appropriate section of this report.

No scale is of any value unless it measures the property which it purports to measure. Rokeach supports the validity of the Dogmatism Scale by pointing to experimental studies which indicate that his scale can be used to predict certain forms of behavior and distinguish between persons who achieve differing scores on a number of other measures.

There is no need to go into great detail regarding the evidence bearing on the validity of the Dogmatism Scale as a measure of the open and closed mind. . . . It will perhaps suffice to say here that those who score extremely high on this scale are shown to differ consistently from those who score extremely low in the ability to form new belief systems, whether these systems are conceptual, perceptual, or aesthetic in nature.³

³Ibid., p. 397. Indeed, the last two-thirds of The Open and Closed Mind can be seen as a report of experimental, historic, and survey investigations aimed at establishing the validity of the scale. Some of the results of these studies are reviewed in Chapter I of this study (supra, pp. 30-33).

As Duns points out, his study was, "in a sense, aimed at the validation of the scores obtained on the questionnaire, using verbal performance as the criterion."⁴ Taken in this sense, the results obtained by Duns tend to increase confidence in the validity of the Dogmatism Scale. In the same fashion, this investigation is a further inquiry into scale validity using tendency of dogmatism congruity to form a basis for persuasion as system of judgment.

Response set. Like the Adorno scales, the dogmatism questionnaire was comprised of items worded in a single direction--agreement always is considered to indicate dogmatism, disagreement indicates openmindedness. The use of this type of questionnaire immediately raises the question of "response set," or the inclination of some individuals to respond to all items in either the affirmative or negative regardless of item content. Rokeach suggests several purely "logical" arguments which he believes establish the Dogmatism Scale as free of response set.⁵

⁴ Duns, op. cit., p. 55.

⁵ See Rokeach, op. cit., pp. 405-06. The arguments presented by Rokeach include the consistent differences between results obtained from the Dogmatism Scale and other measures and the wide variety of scores obtained from the scale.

However, Rokeach offers no statistical proof that response set does not operate in his scale. It was for this reason that Duns included in his questionnaire a "Reverse Dogmatism Scale" composed of items worded in the opposite direction of those contained in the Rokeach test. The rationale for this method of checking "response set" is; if true "response set" is operating individuals will tend to answer both the original and "reversed" items in the same direction. Thus, if original and "reversed" scales correlate positively rather than negatively, it can be assumed that "response set" is "coloring" results from the questionnaire.

Though not absolutely conclusive, Duns' results indicate that "response set" does not operate in the Dogmatism Scale. "The extreme high and low (upper and lower quartile) sample also demonstrates significant differences between high and low Total, Reverse, and Positive Dogmatism Scale scores."⁶

However, at best, this study was conducted on the assumption that Rokeach's logical and Duns' statistical evidence establish the Dogmatism Scale as relatively free of "response set," and thus, of sufficient validity to use in this study. Further investigation of this question is

⁶Duns, op. cit., p. 110.

necessary before a positive statement can be made one way or another.⁷

The measuring instrument.⁸ It will be recalled that the first criteria established for this study was an accurate measure of the personalities of audience and speakers. The use of the Rokeach Dogmatism Scale was considered a satisfactory method of meeting this requisite. The following "E" Form was employed in the study.

1. The United States and Russia have just about nothing in common.
2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.
3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.
4. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.
5. Man on his own is a helpless and miserable creature.
6. Fundamentally, the world we live in is a pretty lonesome place.
7. Most people just don't give a "damn" for others.
8. I'd like it if I could find someone who would tell me how to solve my personal problems.
9. It is only natural for a person to be rather fearful of the future.
10. There is so much to be done and so little time to do it in.

⁷In one fashion, results from this study may provide another "logical" argument against the consideration of "response set" as an important operating factor in the Dogmatism Scale. It would be difficult to account for dogmatism scores in terms of response set if the central hypothesis of this study is correct.

⁸The entire scale, the written instructions given with the questionnaire and the information sheet which was attached to the test are included in Appendix A.

11. Once I get wound up in a heated discussion I just can't stop.
12. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.
13. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.
14. It is better to be a dead hero than to be a live coward.
15. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.
16. The main thing in life is for a person to want to do something important.
17. If given the chance I would like to do something of great benefit to the world.
18. In the history of mankind there have probably been just a handful of really great thinkers.
19. There are a number of people I have come to hate because of the things they stand for.
20. A man who does not believe in some great cause has not really lived.
21. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.
22. Of all the different philosophies which exist in this world there is probably only one which is correct.
23. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.
24. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.
25. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.
26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.
27. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.
28. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.
29. A group which tolerates too much differences of opinion among its own members cannot exist for long.

30. There are two kinds of people in this world:
those who are for the truth and those who are
against the truth.
31. My blood boils whenever a person stubbornly
refuses to admit he's wrong.
32. A person who thinks primarily of his own happiness
is beneath contempt.
33. Most of the ideas which get printed nowadays
aren't worth the paper they are printed on.
34. In this complicated world of ours the only way
we can know what's going on is to rely on
leaders or experts who can be trusted.
35. It is often desirable to reserve judgment about
what's going on until one has had a chance to
hear the opinions of those one respects.
36. In the long run the best way to live is to pick
friends and associates whose tastes and beliefs
are the same as one's own.
37. The present is all too often full of unhappiness.
It is only the future that counts.
38. If a man is to accomplish his mission in life it
is sometimes necessary to gamble "all or
nothing at all."
39. Unfortunately, a good many people with whom I
have discussed important social and moral
problems don't really understand what's going
on.
40. Most people just don't know what's good for them.

IV. PRE-DEBATE CONTROLS

Selection of speakers. Two main elements entered into the selection of speakers for the experimental situations, personality structure and speaking ability. In regard to personality structure, it was essential that the audience be presented with a choice between two definite personality "types." Thus, the first requirement established for the selection of experimental communicators was that each pair of debaters be composed of one speaker selected from each of

the extreme quartiles of the dogmatism scores attained total population of prospective communicators.

Relative speaking ability was the second major consideration in the selection of debate competitors. In order to prevent audience members from making debate decisions based on the speaking ability of the contestants, it was requisite that each experimental debate be between speakers of comparable speech skills. The method for achieving this control was the use of the University of the Pacific "Forensic Squad" as a "pool" of prospective communicators. This group was particularly well suited for this purpose by virtue of two facts. First, extensive records are kept of the performance of each squad member in inter-collegiate forensic competition. Second, due to a long series of practice debates conducted at the beginning of each semester, the "debate coach" is very familiar with the speaking ability of each squad member. These conditions made the selection of speakers a relatively simple matter. After all those prospective communicators with dogmatism scores in the extreme quartiles were identified, the writer selected four possible pairs of communicators and submitted their names to the Director of Forensics. From this list, he selected the two opponents for each experimental session. On the basis of forensic records and his personal judgment, he stated there was no significant difference in the speech skills of the competing speakers.

Thus, on the basis of pre-experimental controls, each pair of contestants were to be of equal speaking ability and to represent one extremely dogmatic and one extremely open-minded individual. This method of selecting speakers was deemed appropriate to the second criteria for this investigation.

Selection of the debate question. One of the criteria established for the experimental situation was that the question selected for the debates should be free of "topic bias." In other words, it was necessary to discover a debate proposition concerning which few of the audience members had opinions prior to the debates. After consideration of a number of possibilities, "Should the United States embark upon a crash program to develop the R. B. 70?" was chosen as the experimental topic. The basis for this choice was found in a poll taken by the writer among thirty sophomores, juniors, seniors, and graduate students which produced the following results:

TABLE I

RESULTS OF PILOT POLL OF R. B. 70 OPINION

No knowl- edge of question	No opinion concerning question	For crash program	Against crash program	Total
23	5	1	1	30

It was assumed that if these results were indicative of knowledge concerning the R. B. 70 prevalent in the student body outside of the predominately freshman "Speech 59" population, the audience for the debates would be characterized by a similar ignorance. The chance that use of a questionnaire to check this assumption any time prior to the actual experimental speech situation would stimulate thought and opinion formation among the experimental audience mitigated against the use of this type of validation until immediately prior to the experimental sessions. The results of this test will be considered at the appropriate time. However, on the basis of the pilot poll, the question selected was judged to be extremely free of topic bias.

Preparation of speech materials. The fourth criterion established for the experimental debates was, "The supporting materials available to the speakers should be of equal persuasive value and represent a wide range of types of supports from which they might select the supports they would employ." The necessity of this requirement is obvious. Should one speaker avail himself of supporting materials which were much more persuasive than those available to his opposition, audience decisions in his favor would be based upon superiority of evidence rather than personality structure. One of the methodological problems faced in this investigation became that of controlling the quantity and quality of

materials on each side of the question in order that neither position would have an advantage arising from superiority of supporting materials.

This difficulty was met by the creation of "information packets" for each side of the debate and limiting the speakers to the use of only those materials included in the "packets."⁹ One of the advantages of the R. B. 70 issue was that its current nature made it possible to include a number of duplicated magazine articles in the materials supplied to each speaker.¹⁰ The articles were selected for equal persuasive content and in order to provide the speakers with a wider choice of materials from which to choose, certain pieces of fictitious "congressional testimony" were fabricated by the writer. Diversification of "tone" i.e., emotional and logical evidence and variety of argument were the goals set for this "manufactured evidence."¹¹

Before supplying the speakers with these materials, the "information packets" were submitted to three expert

⁹The manufactured evidence plus a bibliography of all material used in the "information packets" is found in Appendix C.

¹⁰Due to a lack of suitable magazine materials the pro-crash program included "B-70 'Valkyrie,'" a pamphlet published by North American Aviation Company, date of publication unknown. The pamphlet is no longer available to the general public. A copy is on file with the writer.

¹¹This variety was required by the assumption that one of the choices which will be strongly influenced by personality structure is the decision to use or not to use a particular piece of evidence.

debate judges, members of the Department of Speech faculty, for purposes of evaluating the comparative persuasiveness of the "pro" and "anti" crash program materials. It was the unanimous opinion of these three authorities that the information packets were of equal persuasiveness and variety of appeals.

V. CONTROL AND MEASUREMENT OF DEBATE RESULTS

Judgment of speech performances. Regardless of the precautions taken before the actual debates, it was evident that the pre-experimental controls might "break down." For example, though of previously judged equal speaking ability, there was a possibility that lack of adequate preparation, poor health, physical appearance, or any one of a number of contingencies might arise which would make one speaker less persuasive than his opposition. For this reason, four members of the speech department staff were present at each experiment. They were asked to closely observe both speakers and at the close of the debate indicate their opinion of the comparative "general persuasiveness" of the two contestants. Of course, this procedure could not prevent the pre-experimental controls from failing, but should the judgment of this panel of experts indicate that these measures had malfunctioned in either or both sessions it would be necessary to discard or treat differently the data arising from the "renegade" session (s).

Measuring audience judgments. The success of the entire procedure of this study necessarily rested upon controls and the obtaining of data from audience judgments which would lend itself to analysis of the hypothesis under study. This data was supplied by a questionnaire used in the experimental sessions. The instrument consisted of two basic sections, a pre-test and a post-test. The questions in each section will be presented here as both divisions are discussed.¹²

The pre-test was aimed at arriving at an estimate of "topic bias" concerning the R. B. 70 and general knowledge of national defense and the Air Force in particular.

1. _____ The present Secretary of Defense is:
 - a. Chares E. Wilson
 - b. E. L. Whittle
 - c. Robert McNamara
 - d. Christian Herter
2. _____ The present Chairman of the Joint Chiefs of Staff is:
 - a. Curtiss LeMay
 - b. Lionel Lemmnitzer
 - c. Charles Radford
 - d. Walter Reuther
3. _____ The plane which immediately preceded the B 47 and B 52 as the backbone of S. A. C.
 - a. B 36
 - b. B 29
 - c. B 51
 - d. B 50
4. _____ A long time champion of the U. S. Air Force in the U. S. Senate is:
 - a. Senator Eastland
 - b. Senator Capeheart
 - c. Senator Claighorn
 - d. Senator Symington

¹²The entire questionnaire is reproduced in Appendix F.

The next question concerns the question which you hear discussed today. Please mark the answer which comes nearest to your opinion.

5. _____ The best policy to follow in relation to the R. B. 70 is:
- a. A crash program to ready the plane for production
 - b. Continue the present development program
 - c. I am familiar with the issue but have no opinion
 - d. I am not familiar with the issue

Questions dealing with the Air Force and national defense were included to provide a "counter hypothesis." There was a possibility that even if question (5) did not reveal a specific "topic bias" the amount an individual knew about national defense might tend to form a general attitude which would incline him to vote one way or the other on the debate question regardless of the personalities involved.¹³

The second part of the experiment questionnaire was responded to immediately after the debate ended. It consisted of 7 items.

1. I cast my vote for: (Check one
no ties allowed.)

_____ The first speaker

_____ The second speaker

This was the "key question" of the experiment and provided the central data for testing the central hypothesis of this study.

¹³The results of this and all other measurement tools will be presented in the appropriate section of this report.

The second question involved a familiar measure of proficiency.

2. Give a letter grade (A,B,C,D or F) to each speaker.

_____ The first speaker

_____ The second speaker

Would personality types tend to judge speakers of similar belief systems to be better speakers, and opposite types as less talented? It was hoped that item 2 would answer that question.

3. Briefly state the reason for your decision and the grade you gave the speakers.

This "open ended" question was devised in hopes of providing subjective information which would indicate if different personality types based their decisions on differing considerations. In part, item 3 can be considered a further investigation of the validity of the dogmatism scale. For if, as Rokeach indicates, differing degrees of dogmatism result in differing perceptual and conceptual reactions,¹⁴ it stands to reason that differing degrees of dogmatism would result in differing reactions to speakers and their arguments.

4. Check the statement nearest your attitude

_____ Agree strongly with first speaker

¹⁴Rokeach, op. cit., p. 397.

- _____ Agree moderately with first speaker
- _____ Agree mildly with first speaker
- _____ Agree mildly with second speaker
- _____ Agree moderately with second speaker
- _____ Agree strongly with second speaker

Item 4 represents an effort to discover if there would be differing degrees of persuasion effected by either speakers' personality type among the various audience personality types.

The last three items on the post-test involved the use of the "Semantic Differential"¹⁵ in a venture to uncover any response patterns among the personality types of the audience to either of the speakers or the subject of their communications.

THE R. B. 70

- 1. Effective _____:_____:_____:_____:_____:_____:_____: Ineffective
- 2. Invulnerable _____:_____:_____:_____:_____:_____:_____: Vulnerable
- 3. Timely _____:_____:_____:_____:_____:_____:_____: Obsolete

¹⁵For a detailed discussion of the "Semantic Differential" the reader is directed to Charles E. Osgood, George J. Suci and Percy H. Tannenbaum, The Measurement of Meaning (Urbana, Illinois: University of Illinois Press, 1958). It should be noted that the differentials employed in this study are not as "sophisticated" as those described in The Measurement of Meaning and as a result the methods of statistical evaluation applied to results from these instruments are different from those developed by Osgood, Suci, and Tannenbaum.

4. Powerful ____:____:____:____:____:____:____: Weak
5. Hard ____:____:____:____:____:____:____: Soft
6. Aggressive ____:____:____:____:____:____:____: Defensive

THE FIRST SPEAKER

1. Logical ____:____:____:____:____:____:____: Illogical
2. Believable ____:____:____:____:____:____:____: Unbelievable
3. Unconvincing¹⁶ ____:____:____:____:____:____:____: Convincing
4. Factual ____:____:____:____:____:____:____: Emotional
5. Lucid ____:____:____:____:____:____:____: Obscure
6. Aggressive ____:____:____:____:____:____:____: Defensive
7. Strong ____:____:____:____:____:____:____: Weak
8. Dogmatic ____:____:____:____:____:____:____: Open-Minded
9. Likable ____:____:____:____:____:____:____: Repulsive
10. Like me ____:____:____:____:____:____:____: Unlike me
(exclude sex)

THE SECOND SPEAKER

1. Logical ____:____:____:____:____:____:____: Illogical
2. Believable ____:____:____:____:____:____:____: Unbelievable
3. Unconvincing ____:____:____:____:____:____:____: Convincing
4. Factual ____:____:____:____:____:____:____: Emotional

¹⁶The "affirmative" and "negative" alternatives for items 3 and 8 were inverted from the regular pattern in an effort to "break" any "response set" which might develop in responding to the "Semantic Differentials." The application of the "Semantic Differential" in this will be discussed in greater detail in Chapter IV.

5. Lucid ____:____:____:____:____:____:____: Obscure
6. Aggressive ____:____:____:____:____:____:____: Defensive
7. Strong ____:____:____:____:____:____:____: Weak
8. Dogmatic ____:____:____:____:____:____:____: Open-Minded
9. Likable ____:____:____:____:____:____:____: Repulsive
10. Like me ____:____:____:____:____:____:____: Unlike me
 (exclude
 sex)

The great virtue of the "Semantic Differential" is that it is almost "open ended" in operation: within the limitations of the paired opposite words of each item the respondent is free to make his own judgment. If Rokeach is correct in maintaining that the extreme dogmatic and open minded individual perceive other individuals and objects in a differing fashion, it was felt the use of the "Semantic Differential" might cast some light on what these differences were.

CHAPTER III

DESCRIPTIONS OF POPULATION AND EXPERIMENTAL CONDITIONS

I. DESCRIPTION OF POPULATION

The subjects, comprising the audiences for the two debates, were all students enrolled in the University of the Pacific's "Speech 59," "Fundamentals of Speech" courses.

At the time of administration of the Dogmatism Scale the population totaled 167.¹ Experimental mortality reduced this number who actually listened to the two debates to 144.

Attached to the dogmatism questionnaire was a form used to obtain personal information concerning each subject. This device was closely modeled on a form first employed by Duns.² and ³

It . . . included, among other areas, questions concerning the respondent's age, sex, year in college . . . religious preference, fraternity or sorority affiliation, and political preference. These were included for two reasons. First, name of the areas will be compared with the scores obtained on the questionnaire to determine if, for instance, there is a relationship between political preference, sex, age,

¹ All information concerning composition of the population will be based on this total unless otherwise indicated.

² With revision made to conform to conditions at the University of the Pacific, this was the same form as employed by Donald Duns in "A Study of the Relationship Between Dogmatism and Speech Behavior" (unpublished Doctoral dissertation, Northwestern University, Evanston, Illinois, 1961).

³ See Appendix A.

etc., and manifestations of dogmatism as indicated by the scale. . . . Second, knowing these areas will permit a thorough analysis of the nature of the total subject population and the comparability of the various subgroups.⁴

In addition to the data from the personal information form, the "Verbal Reasoning Score" and "Predicted Speech Grade" achieved by 132 of the subjects on the Washington Grade Point Prediction Test were obtained from the University Dean of Students office.

Class distribution. All four undergraduate classes were represented in the original 167 subjects. Of this total, over eighty per cent (141) were freshmen. There were 16 sophomores, 6 juniors, and 4 seniors. This type of distribution was to be expected as "Speech 59" is intended primarily for freshmen students.

Sex and age levels. As would be expected from the class distribution, the age level of the subjects was concentrated in the 18 to 20 bracket. Few students fell below this level. There were 9 seventeen year old students and 13 above the age of twenty, the oldest being thirty-four.

Consistent with the general University pattern for lower division students, there were more female (112) than male (59) subjects.

⁴Duns, op. cit., pp. 75-76.

Fraternity and sorority affiliation. Accurate data on fraternal association was unobtainable. Fraternity and sorority "rush" occurred during the period of three weeks in which the Dogmatism Scale was administered to the various sections of "Speech 59." As a result some students who indicated no affiliation in the early stages of testing may have become affiliated after completing the questionnaire. In addition, conditions on the Pacific campus were such that some fraternity and sorority members were reportedly refusing to state their membership on questionnaire and survey sheets. These two circumstances precluded the chance of easily obtaining accurate information on this item.

Religious affiliation. One hundred and fifty students indicated some religious affiliation. Students who did not claim membership in any particular denomination identified themselves as "Protestants" or "Christians." The vast majority who specified religious connections were members of Protestant groups. There were 10 Lutherans, 16 Episcopalians, 43 Methodists, 27 Presbyterians, 11 "Protestants," 12 Catholics, and 4 Jewish subjects. In addition, 17 students were classified as "other." These included individuals stating affiliation with a denomination shared by three or fewer respondents.

Political preference. The two party system was strongly reflected in the subject population. "Republicans"

accounted for 68 members of the population while "Democrats" comprised 28. Only two subjects, one "Socialist" and one "Conservative" were members of splinter groups. There were 69 subjects with no political preference.

"Predicted speech grades." The 132 obtained predicted speech grades ranged from 18, a high "D," to 37, an "A." The mean predicted grade was 27.80.⁵

"Verbal reasoning scores." The range of verbal reasoning scores ran from a high of 107 to a low of 42, with a mean score of 75.78.

Academic majors. The population indicated academic majors which fell into eleven categories: The largest of these included science 8; pharmacy 14; psychology and sociology 13; education 22; business administration 12, English 14; fine arts 12; history 11; religious education 7; foreign language 7; and undecided 11.⁶

Analysis of population. As the purpose of this study was to evaluate a general hypothesis concerning the nature of

⁵These scores are equal to 1.8, 3.7, and 2.78 on the 4 point grade-point scale.

⁶There were other majors included but were indicated by too few students to be subject to valid statistical analysis. These included pre medicine 4; philosophy 3; home economics 4; math 3; engineering 4; economics 4; music and speech therapy 2; and speech 3.

ethos the data obtained from the information sheet is extremely important for it will indicate how representative of the general population the subject population is and what restrictions must be placed upon generalizations arising from this study.

The exclusively collegiate nature of the audience is the first major restriction enforced by the population. This factor places the subjects above the educational norm for the entire population. Similarly, the brief age span included in the subject audience places another limiting factor upon generalization as does the unequal distribution of political preference and sex.

The variety of religious affiliation in the subject population provides an interesting basis from which to test the connection between dogmatism and religious beliefs. However, the small size of the various religious groups place restrictions on this analysis.

The following generalizations seem called for concerning the audience population. First, the sample is not typical of the general population in many respects, particularly age and educational level. Second, the population is homogenous in most features (i. e., age, educational status, and political preference), though there are some areas of difference namely, academic major and religious preference. The homogeneity limits some comparisons, but the areas of difference provide

for interesting study. Due to these circumstances generalizations from this study must be limited in accordance to the observed differences between the subject population and the general populus.

II. ADMINISTRATION OF DOGMATISM SCALE

Testing methodology. Differing conditions in the administration of questionnaires introduce extraneous conditions which may tend to effect the scores of various groups of subjects. In light of this possibility, efforts were made to keep the conditions of scale presentation as consistent as possible. In every case but one, the result of a time conflict, the writer administered the scale to the eight participating classes. Upon introduction to the class the writer would tell the students that they were about to participate in a survey being conducted by the "National Opinion Institute."⁷ As the questionnaires were being distributed, oral instructions were delivered. Instructions included requests that the respondents read and answer all questions carefully; that they complete the information sheet appended to the questionnaire; and that they raise their hand

⁷As many of the students were personally acquainted with the writer this "white lie" seemed necessary to prevent some testers from answering the questionnaire in such a fashion so as to meet their estimate of the writer's expectations.

when they had completed the test to allow for rapid collection. The subjects were also urged to write any comments concerning the scale in the space provided on the information sheet. At the close of these oral directions, the writer asked the subjects to read with him the instructions on the cover sheet.⁸ Once again the students were urged to answer all questions and record any personal reactions to the questionnaire.

The presentation of the questionnaire took about five minutes. Most respondents used twenty to thirty minutes to complete the form, though some used as many as forty-five minutes.

This format was followed in every testing situation. However, several factors served to keep the conditions from being identical. The scale was administered in eight different rooms at hours ranging from 8:00 in the morning to 2:00 in the afternoon.⁹ The writer was introduced in several fashions (i. e., "a graduate student," "an instructor in the

⁸See Appendix A. These instructions were derived from T. W. Adorno, et al, The Authoritarian Personality (New York: Harper and Brothers, 1950), pp. 24-25.

⁹The prospective communicators took the test at 8:00 in the evening at a regular meeting of the debate squad. The same procedure for scale administration was employed at that time.

department," "Mr. Steve Collins, who has a test for you," and "a master's candidate doing research."¹⁰

Student comments on the Dogmatism Scale. Some of the most interesting data in this study was provided by the comments made by 43 subjects. These remarks could be placed in three general groups: "affirmative"--indicating a liking for the questionnaire, "negative"--comments criticizing specific items on the entire scale, and "inquiries"--students who desired to know the results of the test. There were only four (4) affirmative comments. Typical of these was, "I liked the test, it made you think." A very interesting suggestion was made by one of the two students who requested the test results, "It looks like somebody's been reading The True Believer."¹¹ The vast majority of comments (37) were negative in nature. These ranged from open hostility; "What I think about these things is nobody's damn business! I feel no obligation to sign!" to mild disapproval; "A lot of the questions are vague and abstract." Or "I find some questions ambiguous." The greatest number of negative comments

¹⁰ In the last case a quick explanation was made attempting to divorce the questionnaire from any master's thesis work. This seemed necessary to prevent a biasing prejudice which is caused by some students' resentment over being used as "guinea pigs" for graduate students. The "story" told this particular class was that the writer was fulfilling an assignment for a statistics class in conducting this research for the "National Opinion Institute."

¹¹ Duns, op. cit., p. 87, records one comment reading, "This sounds like Escape From Freedom."

were of this latter variety. The words "vague" and "ambiguous" appeared repeatedly.

Several students wrote their reactions directly in the question portion of the Dogmatism Scale rather than on the information sheet. Item 15 ("While I don't like to admit this even to myself, my secret ambition is to become a great man like Einstein, Beethoven, or Shakespeare") drew three comments. Two students stated that they wanted to be "great" and would admit it to anyone.¹² One other comment consisted of an art major's addition of "Degas" to the question's list of great men.

Duns included a Manifest Anxiety Scale with his questionnaire and obtained results which indicated, "A trend points to a hostile reaction to the scale as a result of dogmatism with low anxiety."¹³ He also states, "The critical group (15), with five exceptions was decidedly on the dogmatic side."¹⁴ This study contained no check on anxiety, however, the general dogmatism of negative comment writers was not on the dogmatic side. The mean dogmatism score of the entire population was 149.52, while the mean score of critical respondents was 149.89. A possible source of the difference between these results and those reported by Duns

¹² Ibid., Duns records a similar comment.

¹³ Ibid., p. 91.

¹⁴ Ibid.

lies in the fact that all groups of subjects in this study were urged to write comments whereas Duns encouraged some groups and did not encourage others.

At any rate, the findings reported both here and by Duns indicate a possibility that individuals of differing degrees of dogmatism may respond to testing situations in a different fashion. This possibility warrants further investigation, for if true, it would cast serious doubt on the validity of the questionnaire method, and indeed, all systems of paper and pencil testing.

III. GENERAL PROCEDURES

Creation of audiences. One week prior to conducting the two experimental debates the regular Tuesday morning "Speech 59" Mass lecture class, was told that a "special event" would occur the next week which would require one-half of the lecture class, sections to attend on Tuesday morning while the other half sections would come on Thursday. This procedure created an audience of 82 for the first session and 77 for session two. However, only 76 and 68 in the respective audiences had completed the Dogmatism Scale, creating a "subject mortality" which reduced the population from the original 167 to 144.

Description of the audiences. Table II presents the composition of the audience for Debate I as classified by dogmatism score quartiles.

TABLE II
AUDIENCE FOR DEBATE I AS CLASSIFIED
BY DOGMATISM SCORE QUARTILES

Quartile	Number of subjects	Percentage of audience
1	19	25.0
2 and 3	35	46.1
4	<u>22</u>	28.9
Total	76	

Table III provides a similar description of the audience for Debate II.

TABLE III
AUDIENCE FOR DEBATE II AS CLASSIFIED
BY DOGMATISM SCORE QUARTILES

Quartile	Number of subjects	Percentage of audience
1	23	33.82
2 and 3	30	44.12
4	<u>15</u>	22.06
Total	68	

Preparation of speakers. The four speakers were contacted in a period ranging from one to two weeks before the debates and asked if they would like to participate in a "model" two man debate before the "Speech 59" lecture session.

All four agreed to participate. None of the speakers learned of the debate topic until the Friday before the Tuesday on which Debate I was conducted. At this time all four were given the "information packets." In an attempt to stimulate preparation, the speakers were told a reward of a free steak dinner was to be made to the winning debater from each contest. The time limit of 7 minutes was stressed as was the requirement that they use no materials from sources other than the "information packets." At no time were the speakers told that they were participating in an experiment or that their selection had any connection with the "General Information and Opinion Questionnaire" which they had completed some eighteen days previously.

Debate procedure. On the mornings of the two debates¹⁵ the pre- and post-debate questionnaires were distributed as soon as the audience was seated. An instructor, other than the writer, asked the class to please complete the first page of the questionnaire, assuring them that their answers on this "information sheet" were in no way connected with the grades they would receive in "Speech 59." When indications were that the students had completed the information test the same instructor informed the listeners that they were about

¹⁵Complete transcripts of all speeches can be found in Appendix D.

to hear a debate on the question: "Should the United States Embark Upon a Crash Program to Develop the R. B. 70?", and that the questions they had just answered were designed to test their general knowledge of national defense and to obtain their opinion on the question before they heard the debate. He then gave a brief description of the historical background of the R. B. 70 and introduced the first speaker. At the end of the first address the second speaker, who had been waiting outside of the room, was introduced. At the close of his remarks the listeners were told to complete the second and third pages of the questionnaire and to consider themselves excused when finished.

There were only two differences in the procedures of Sessions I and II. At the end of the first session audience members were asked to refrain from mentioning the topic of the debate to any of those students who would hear the second contest on Thursday. The second change involved a rotation of speaking order. In Debate I the dogmatic speaker opposed the "crash program" and spoke first while the open-minded speaker advocated the "crash program" and spoke second. In the second session, the open-minded speaker opposed the "crash program" and spoke first, the high dogmatic speaker advocated the "crash program" and was second speaker. This rotation was affected to provide a check on any "primacy" or "recency" effect which might operate in regard to dogmatism.

IV. EVALUATION OF EXPERIMENTAL CONDITIONS

Debate I

Description of speakers. Both speakers for the first debate were first year debaters for the University of the Pacific. The teams of which the speakers were members had achieved identical records in previous debate tournaments, making elimination rounds on two occasions but failing to place in both cases. Neither speaker had been successful in individual events.

The breakdown of control. At one time in the planning of this study serious consideration had been given to having the speakers rehearse their speeches before a panel of expert judges. The purpose of this rehearsal was to allow the panel to suggest any changes in the content and delivery of the communications which it felt necessary to assure the equality of persuasiveness required to successfully fulfill this important criterion for the experimental sessions. The rehearsal control was finally rejected. It seemed that choices made by the speakers should be based entirely on their own personal judgments. In taking suggestions from a panel of experts a speaker would, in effect, be changing his speech from a product of his own personality to a product of his judgment combined with that of the panel. This decision

increased the risk that the performances of one or both pairs of communicators would be unequal which would result in either major alteration in the treatment of data arising from the session(s) involving the breakdown(s) or a total discarding of these results. However, the risk of creating misleading results from the use of the panel was deemed greater than that of failing to evaluate the hypothesis because of a breakdown in controls.

If fears involving the effect of influence from the panel of experts were unfounded, the events of Debate I were unfortunate. The controls aimed at assuring speaker equality failed. All four speech instructors evaluating the comparative general persuasiveness of the two debaters were of the opinion that the second speaker was much more effective than the first. All of the evaluating judges agreed that data from Debate I should be used only as subsidiary information in evaluating the influence of personality structure upon persuasion. Thus, the results of Debate I shall be considered as corollary to the results of the more successful Debate II.

Debate II

Description of speakers. The two speakers in Debate II were experienced upper division debaters for the University of the Pacific. The low dogmatic (dogmatism score = 119.) speaker was assigned the first speaking position and opposed

the "crash program" to develop the R. B. 70. The high dogmatic (Dogmatism score = 192.) speaker was given the second position and advocated the "crash program." Of the two the first speaker had been the most successful in forensic competition. This difference, in the opinion of the debate coach, arose from the first speaker's greater ambition and more "academic manner" rather than from a greater degree of general speech skills. Intimate knowledge of the speaking styles of both debaters led the debate coach to believe that in speaking before an audience of college students rather than before a debate judge, neither speaker would enjoy a significant advantage.

In addition to the more extensive speech experience of the speakers, one other circumstance differentiated the speakers of Debate II from those of Debate I. This was consideration of speaker prestige. Both speakers involved in the second competition were well known campus figures. The first speaker was the then current student body president and had received extensive publicity both for his debate victories and academic record. (For example, speaker #1 had been awarded a Woodrow Wilson Fellowship.) The second speaker benefited from a similar, though somewhat less notable record. He had been a consistent debate winner, was at the time of the experiment a candidate for student body president, and had achieved notoriety for his academic

accomplishments by virtue of his selection as "captain" of the team which represented University of the Pacific on the nationally televised "General Electric College Bowl."

All things considered, it was the opinion of the debate coach and other observing judges that he first speaker probably possessed an advantage of slightly higher prestige.

Success of controls. At the close of the second debate the unanimous opinion of the observing judges was that, though the low dogmatic speaker's performance was slightly superior, the two debaters were of sufficiently equal general persuasiveness to employ data from Debate II in the evaluation of the central hypothesis advanced in this study.

Summary

The speech situation is obviously an extremely complex social phenomena involving an infinity of variables. Complete experimental control is, therefore, almost a total impossibility. The best an investigator applying the experimental method to speech can hope for is sufficient control to allow him to observe indications, clues, and trends in the variable he is studying. It was felt, that at least in the case of Debate II, the controls employed in this study were successful enough to warrant examination of data from this study in an attempt to assess the influence of personality structure upon persuasion.

CHAPTER IV

THE RESULTS OF THE STUDY

The results of this study will be reported in three basic divisions. First, there will be a description of the population in terms of the relationship between dogmatism and various factors obtained through the use of the information questionnaire and other sources and a description of quartile distribution of subject dogmatism sources. Second, there will be a presentation of the results obtained from the debates designed to test the central hypothesis. The third division will consist of a brief discussion of the results obtained through the "Semantic Differentials" included in the post-debate questionnaires.

I. THE RELATIONSHIP BETWEEN DOGMATISM AND SELECTED FACTORS

Comparison of "Speech 59" Sections

The audience population for this investigation was comprised of the combined populations of nine class sections of "Speech 59." Before these groups could be combined it was essential to determine that, in relation to dogmatism, the groups were homogeneous. To evaluate the comparative dogmatism of the nine sections a null hypothesis concerning the mean dogmatism scores of these groups was evaluated.

There should be no significant differences between the mean dogmatism scores for the nine "Speech 59" sections (I, II, III, IV, V, VI, VIII, and X).

Application of an Analysis of Variance "F" Test demonstrated there was no significant difference between all of the groups taken as a whole.¹ Application of "t" tests revealed, however, that differences at the .05 level of confidence existed between Section X and Sections I, IV, V, and VI. The null hypothesis was, therefore, rejected.

The rejection of this particular null hypothesis concerning the homogeneity of the population forced an examination of the groups which demonstrated a significant difference. A study of the dogmatism scores of subjects in Sections X, I, IV, and VI showed the cause of the differences to be the relatively low mean scores of the last four groups and the

¹The analysis of variance ("F") used in this comparison was the "Groups Within Treatments:" The formula for "F" is

$$\frac{s_1^2}{s_2^2} \quad \text{or} \quad \frac{\sum \left(\frac{\sum x}{N} \right)^2 - \frac{(\sum x)^2}{N}}{r - 1} \div \frac{\sum x^2 - \sum \left(\frac{\sum x}{N} \right)^2}{N - r}$$

The "t" Test for significance between individual groups is derived from the Within Means Square of the F source table. The formula is as follows:

$$"t" = .01 \quad "t" \cdot \sqrt{WMS \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}$$

Significance levels of both "F" and "t" are two-tailed.

rather high mean score of Section X. As "t" test revealed no significant differences between the low scoring sections and any other group with the exception of X, it was determined that the cause of the difficulty lay in some element of the latter population. Examination of Section X revealed an absence of low scores, a large percentage of middle range and high scores, and the single highest dogmatism score in the entire population (211).² When this high subject was removed from Section X, the significant difference between this group and every section, with the exception of IV, disappeared. Since much of the difference among groups could be accounted for by one subject, it can be assumed the population generally responded to the Dogmatism Scale uniformly and, thus, no errors were introduced in data collection through lack of subject-group homogeneity.

Analysis of "High" and "Low" Subjects

Following the procedure of Duns, the total population of 167 was divided for analytical purposes into quartiles. The first (highest) and fourth (lowest) were selected for intensive study in the evaluation of the central hypothesis.

²It is interesting to note that this score was made by an African exchange student who is a member of one of the highly nationalistic political parties of West Africa. The relationship between extreme dogmatism and political extremism is borne out in this one case.

Table IV presents the distribution of the population by quartiles.³

TABLE IV
DISTRIBUTION OF POPULATION BY QUARTILES

Quartiles	Number of subjects	Quartile scores	Mean dogmatism score
Q 4	43	Above 167.24	184.21
Q 2 & 3	78	-----	147.49
Q 1	46	Below 132.88	120.35

It was expected that the differences between the high (4) and low (1) quartiles would be significant. To evaluate this assumption the following hypothesis was tested:

There will be a significant difference between the mean dogmatism scores of the "high" and "low" quartiles of the population selected on the basis of dogmatism scores.

When subjected to a "t" test for significance, the difference between the mean dogmatism scores of the "high" and "low" quartiles proved to be significant beyond the .01 level of confidence. The hypothesis was accepted.

³Quartiles were obtained through application of the formula

$$Q_i = Y_i + \frac{(.25iN - x_i)C}{f_i}$$

$i = 123$

This formula is used to determine the upper boundaries of Q 1 and lowest score of Q 4. Thus, the 3 above refers to the highest score in the third quartile of subjects.

The Relationship Between Dogmatism and Selected Factors

Grade point prediction and verbal reasoning scores.

"Verbal reasoning" and "predicted speech grade point" scores taken from results of the "Washington Grade Point Prediction Test" were obtained from the Dean of Students' Office for 132 of the subjects. Table V illustrates mean "verbal reasoning" and "speech grade point prediction" scores of the extreme dogmatism score quartiles.

TABLE V

COMPARISON OF MEAN VERBAL REASONING AND SPEECH GRADE PREDICTION SCORES BY HIGH AND LOW QUARTILE GROUPING OF DOGMATISM SCORES

Group	Mean "Verbal Reasoning" Score	Mean "Predicted Speech Grade Point"
Q1 (N = 37)	75.62	28.59
Q2 (N = 35)	69.91	27.68
Total (N = 72)	72.85	28.15

No significant difference between either verbal reasoning or predicted speech grades was discovered through application of "t" test to the mean scores of the two extreme

quartiles.⁴ However, Rokeach's experimental evidence of low-dogmatic superiority in problem-solution reasoning indicates the difference in verbal reasoning scores to be in an expected direction.⁵ Further investigation of the bearing of dogmatism upon reasoning ability would serve to clarify this relationship.⁶

Religious affiliation and dogmatism. Included on the general information questionnaire was an item requesting the subject to identify his religious affiliation. Table VI indicates the mean dogmatism scores of the larger denominational groups represented in the subject population.

⁴A "t" test designed for use in comparison of unmatched groups was employed in this study.

$$T = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{[\sum x_1^2 - \frac{(\sum x_1)^2}{N_1}] + [\sum x_2^2 - \frac{(\sum x_2)^2}{N_2}]}{N_1 + N_2 - 2}}} \left(\frac{1}{N_1} + \frac{1}{N_2} \right)$$

Results are two-tailed unless specified.

⁵Milton Rokeach, The Open and Closed Mind (New York: Basic Books, Inc., 1960), pp. 182-214.

⁶Refer to Appendix B for correlational data concerning verbal reasoning, predicted speech grades, and dogmatism.

TABLE VI
COMPARISON OF MEAN DOGMATISM SCORES
BY RELIGIOUS AFFILIATION

Category	Number of Subjects	Mean Dogmatism Score
Catholic	12	146.66
Jewish	4	134.25
Presbyterian	27	148.63
Methodist	43	153.77
Episcopalian	16	161.13
Lutheran	10	154.80
Protestant*	11	147.82
Other**	17	144.75
No preference	27	143.77

* Consists of subjects who did not specify denomination.

** Consists of all subjects listing affiliations held by three or fewer subjects.

When considering religious affiliation, Rokeach treated only four groups: Catholics, Protestants, Jews, and nonbelievers. The results reported in Table VI generally follow Rokeach's findings.⁷ Duns considered several denominations. There are some interesting contrasts between Duns' findings and those reported here. Episcopalians represented

⁷ Rokeach, op. cit., p. 112.

the lowest scoring group of Duns' subjects;⁸ the exact reverse is true of this study. Duns reported Catholics to be the highest scoring group;⁹ while in this study they occupy a medial position. This observer is hard pressed to explain these differences. They may arise from chance operations in small samples, or they may be accounted for by other factors. Perhaps there is some cultural difference between the Episcopal Church in the Midwest and that on the Pacific Coast. Possibly Duns' sample of Catholics is atypical of the general population, for the mean dogmatism of his Catholic group is considerably higher than that reported by Rokeach and this investigation.¹⁰ Confirmatory to both Duns' and Rokeach's findings, there were no significant differences between the various religious groups.¹¹

Breakdown by sex. The mean dogmatism score of the male and female subjects comprising the original subject population are presented in Table VII.

⁸ Donald Duns, "A Study of the Relationship Between Dogmatism" (unpublished Doctoral dissertation, Northwestern University, Evanston, Illinois, 1960), p. 135.

⁹ Ibid.

¹⁰ It is difficult to report exact comparisons between the Duns' study and other investigations employing the Dogmatism Scale. Duns reports his findings in terms of "Total Dogmatism," or the combined scores of the Dogmatism Scale and the Reverse Dogmatism Scale, whereas other research is reported in terms of the results of the Dogmatism Scale only.

¹¹ The difference between Jews and Episcopalians approaches the .30 level of confidence. The difference between Episcopalians and Protestants is at the .50 level.

TABLE VII
COMPARISON OF MEAN DOGMATISM SCORES BY SEX

Sex	Number of Subjects	Mean Dogmatism Score
Male	55	151.54
Female	112	149.94

Rokeach neglects to consider sex differences in his book. Attempting to fill this gap, Duns analyzed the difference in the mean dogmatism scores of the male and female segments of his population, and discovered a highly significant (.01) difference in these scores. Though the results found in Table VII are similar to Duns in that the mean female score is below that of the male, the difference reported here does not begin to approach any meaningful level of confidence.

Mean scores, however, do not reveal a very interesting aspect of the relationship between dogmatism and sex within the subject population. Table VIII presents the distribution of sexes within the quartiles of dogmatism scores and the results of a "Chi Square" analysis of this distribution.¹²

¹²The general formula for χ^2 used here is:

$$\chi^2 = \sum \left[\frac{(f_o - f_e)^2}{f_e} \right]$$

Results are one tailed.

TABLE VIII

DISTRIBUTION OF SEXES BY DOGMATISM SCORE QUARTILES

Quartile	Number of of Men	Number of Women	X ²	P
1		29		
2 & 3	19	58	3.69	.10 < .05
4	18	25		

The "Chi Square", a measure of "goodness of fit" between observed and expected distributions, here indicates that there is an almost significant variation between the observed and expected distribution of sexes among the dogmatism score quartiles. This difference apparently arises out of a tendency of male subjects to be "skewed" to the outer quartiles while the female subjects maintain a relatively normal distribution.

The conflict between these findings and Duns, plus the results of "Chi Square" analysis of the distribution of sexes, strongly suggest that more research aimed at clarifying the relationship between sex and dogmatism is in order.

Breakdown by classes. Table IX indicates the mean dogmatism scores of the four undergraduate classes.

TABLE IX
COMPARISON OF MEAN DOGMATISM SCORES
BY UNDERGRADUATE CLASS

Class	Number of Subjects	Mean Dogmatism Score
Freshman	138	149.38
Sophomore	16	152.44
Junior	7	138.14
Senior	6	156.66

Although there are some rather large differences in class means, none of these approaches significance. The largest difference, 18.52, between juniors and seniors, represents a .40 < .30 level of confidence. These findings echo those of Duns.¹³ The data indicate that the extent of undergraduate college education has no appreciable effect on individual dogmatism scores.

Breakdown by political preference. Table X contains mean dogmatism scores for subjects indicating "Democratic," "Republican," or "no preference" in response to the general information questionnaire item concerning political preference.

¹³Duns, op. cit., pp. 132-33.

TABLE X
COMPARISON OF MEAN DOGMATISM SCORES
BY POLITICAL PREFERENCE

Preference	Number of Subjects	Mean Dogmatism Score	"t"	P
1. Democrat	28	153.50		
2. Republican	69	151.93		
3. Democrat & Republican	97	152.38		
4. No preference	69	145.04	1.82	.10 < .05

These results present a contrast to those reported by Rokeach and Duns. Both of these investigators found very small differences between the mean dogmatism scores of various political preferences. Like the groups studied by Duns and Rokeach this subject population demonstrated a very small difference between the mean scores of Democrats and Republicans. But, there are more apparent differences between those who stated a political preference and those who had none. When the mean scores of Democrats and Republicans are compared separately to the "no preference" group, the differences do not attain a high level of significance ("P" is $.40 < .30$ and $.20 < .10$ respectively.) When the two groups with a political preference are combined and compared to subjects with no political choice, the difference approaches the .05 level of confidence. This result was

unexpected and is contrary to both Duns' findings and Rokeach's contention that the "Dogmatism Scale" measures across lines of political ideology. Further investigation seems called for with respect to dogmatism and political preference, or in this case, dogmatism and the lack of political preference.

Breakdown by academic majors. Table XI presents the mean dogmatism scores of various academic major groups in the subject population.

TABLE XI
COMPARISON OF MEAN DOGMATISM
SCORES BY ACADEMIC MAJORS

Major	Number of Subjects	Mean Dogmatism Score
Science	8	144.12
Pharmacy	14	161.93
Psychology-Sociology	13	136.54
Education	22	150.68
Business Administration	12	161.75
English	14	137.42
Fine Arts	12	149.42
History	11	151.45
Religious Education	7	142.14
Foreign Language	7	156.14
Undecided*	11	152.00

*Only majors indicated by at least four subjects were considered.

These results correspond to data presented by Duns who found an almost significant difference between mean dogmatism scores of students enrolled in the Schools of Liberal Arts and Business Administration of Northwestern University.¹⁴ Likewise, they support Rokeach's findings that "... the closed subjects more frequently entered military and commercial careers of an administrative nature."¹⁵ Thus, the high scores of the business administration and pharmacy majors were to be expected, as were the low scores of the psychology-sociology and religious-education groups. (Rokeach reports, "For the open group religious and social interest rank first and second in importance.")¹⁶ However, the differences between foreign language majors and the low scoring groups, though not highly significant, were unexpected.

The data reported in Tables X and XI support earlier findings pointing to a definite relationship between personality structure and interests. This area certainly should provide fertile ground for further investigation.

¹⁴ Duns, op. cit., pp. 131-32. Duns' failure to discover a significant difference between students of the Liberal Arts and Business Administration Schools may lie in the wide range of dogmatism scores which Table XI indicates various majors within the College of Liberal Arts might exhibit.

¹⁵ Rokeach, op. cit., p. 346.

¹⁶ Ibid., p. 339.

II. RESULTS OF EXPERIMENTAL DEBATES

Debate II

Restated for purposes of experimental evaluation the central hypothesis of this study was:

In a debate in which the two competitors are equal in all major variables excepting personality structure, audience members will tend to be persuaded by the speaker whose personality structure is most similar to their own.

As only the second of the two debates held to evaluate this hypothesis satisfied the criteria for this study,¹⁷ it was selected for extensive analysis. Data from Debate I will be treated separately at the close of this chapter and in Appendix E.

Results presented herein have been categorized through the use of "Quartile-Voting Groups." As the name implies, the "Quartile-Voting Group" identifies the speaker for whom the group members voted and the quartile placement of the dogmatism scores of the subjects within each segment. In textual discussion "Quartile-Voting Groups" will generally be referred to in the following fashion: "Quartile 4 voting for the 'high' speaker" will serve to identify the subjects from the fourth quartile of the dogmatism score population who voted for the speaker from the fourth quartile of the "speaker pool" dogmatism scores. In tabular presentation the

¹⁷See pp. 73 et seq.

same group identification will be further abbreviated to "Q 4 v. f. (for voting for) 'high.'" This method of data classification seemed well suited to direct analysis of the central hypothesis and, in the interest of clarity and consistency, was employed throughout the presentation.

Pre-debate Questionnaire Results

"General defense knowledge." Previous to each debate the subjects responded to a questionnaire designed to measure their knowledge of the general area of national defense and their attitude toward the R. B. 70.¹⁸ In order to determine if "general defense knowledge" or specific attitudes toward the R. B. 70 had operated as prejudicing factors in the debate decisions made by the subjects, the results of the pre-debate questionnaire were tabulated in terms of quartile-voting groups. Table XII presents the results of the "general defense knowledge" portion of the pre-debate measure.

¹⁸The complete pre-debate questionnaire is duplicated in Chapter II (supra, pp. 54-59) and in Appendix F.

TABLE XII
RESULTS OF PRE-DEBATE
"GENERAL DEFENSE KNOWLEDGE" ITEMS

Quartile-Voting Group	Number of Subjects	Mean "General Defense Knowledge" Score*
Q 1 v. f. "high"	7	2.57
Q 2 & 3 v. f. "high"	14	1.79
Q 4 v. f. "high"	10	1.80
\bar{X} groups v. f. "high"	31 (total)	1.94
Q 1 v. f. "low"	16	1.75
Q 2 & 3 v. f. "low"	16	1.63
Q 4 v. f. "low"	5	3.00
\bar{X} groups v. f. "low"	37 (total)	1.86

* Total possible "General Defense Knowledge" score is 5.00

Application of an "F" test to the mean "Defense Information Scores" reported in Table XIII revealed a significant difference among all of the groups taken together. The mean "Defense Information Scores" of the various groups were submitted to analysis by "t" tests. The results of the "t" tests are presented in Table XIV.

TABLE XIII

DIFFERENCES BETWEEN MEAN DEFENSE INFORMATION
SCORES BY DOGMATISM SCORE QUARTILES

	Q 1 v. f. "High"	Q 1 v. f. "Low"	Q 2 & 3 v. f. "High"	Q 2 & 3 v. f. "Low"	Q 4 v. f. "High"	Q 4 v. f. "Low"
Q 1 v. f. "high"	---					
Q 1 v. f. "low"	* .82	---				
Q 2 & 3 v. f. "high"	* .78	.04	---			
Q 2 & 3 v. f. "low"	* .94	.12	.16	---		
Q 4 v. f. "high"	* .77	.05	.01	.17	---	
Q 4 v. f. "low"	.43	*** 2.25	*** 1.37	*** 1.21	*** 2.20	---

Q = Quartile
 *** = significant at .01 level
 ** = significant at .05 level
 * = approaches .05 level
 v. f. = voting for

If the central hypothesis of this study is true, Table XIII presents some very interesting data. Assuming the correctness of the hypothesis, it would be expected that the largest number of high dogmatic audience members would vote for the "high" speaker, likewise the "low" subjects would vote for the "low" speaker. A glance at Table XIII will establish that this was the case. But, what of the audience members who did not vote for the speaker whose personality structure was most like their own? Table XIII indicates that the "high" subjects voting for the "low" speaker and the "low" subjects voting for the "high" speaker had significantly or almost significantly higher information scores than the other groups.

One conclusion which might be drawn from these data is that the more an audience member knows concerning the topic under debate, the less likely he is to be influenced by the personality structures of the competing speakers. To the extent that this is true, "General Defense Knowledge" may have influenced the votes of some audience members.

It should be noted before turning to the next consideration that the high "Defense Information" scores of the quartile 4 groups corresponds to Rokeach's finding that high dogmatism subjects were more likely to enter careers relating to the military.

Pre-debate opinion. In order to ascertain whether opinions formed prior to the debate influenced the decisions made by the subjects, all members of the audience answered a question concerning their attitude toward the R. B. 70. Table XIV presents the pre-debate opinion for Debate II expressed in terms of subsequent votes cast by the subjects.

TABLE XIV
PRE-DEBATE OPINION DEBATE II

Group	For Crash Program	Against Crash Program	Know Issue But Have No Opinion	Unfa- miliar With Issue
Q 1 v. f. "low"		3	2	10
Q 1 v. f. "high"	1	1		5
Q 2 & 3 v. f. "low"		5	1	11
Q 2 & 3 v. f. "high"	1		1	12
Q 4 v. f. "low"			1	4
Q 4 v. f. "high"		3		7
Totals	2	12	5	49

Table XV reveals that there was some pre-existing opinion concerning the R. B. 70 and that the majority of this opinion favored the "low" speaker who opposed the crash program. Results from this study must be qualified by this knowledge. Particularly important is the fact that three

"low" subjects who eventually voted for the "low" speaker stated that they agreed with the position favored by the "low" speaker even before the debate.

There is some reason to doubt, however, that these three votes actually expressed opinions held prior to the debate. Examination of the "General Defense Information" scores of the three subjects revealed that none of them answered more than two of the five questions correctly. Especially telling was the fact that not one of the three correctly identified the present Secretary of Defense. It seems somewhat unlikely that an individual should know so little about national defense and have an opinion concerning a specific defense matter such as the future status of the R. B. 70.

Another group which is of interest are the four subjects who changed their opinion in the course of the debate. Three of these opinion changes were by "high" dogmatism subjects who prior to the debate had opposed the "crash program." After hearing a low dogmatism speaker support this belief and a high dogmatism speaker argue for the "crash program," all three changed their opinion and voted for a "crash program." On the other hand, of the five "low" subjects two had opinions prior to the debate only one changed his mind and this was a change from an "anti-crash program" opinion to one favorable to the rapid development of the bomber, the position advocated by the "high" speaker. The numbers involved

in these patterns of belief change do not warrant strong inferences. Yet, it should be noted that they are contrary to findings presented by Rokeach which indicate that individuals scoring high on the "Dogmatism Scale" are least likely to change beliefs.¹⁹ Perhaps further investigation will reveal that the trend reported by Rokeach is reversed when a "high" dogmatic individual advocates a change in the beliefs of a "high" dogmatic auditor.

Post-Debate Questionnaire Results

Degree of persuasion. Included in the post-debate questionnaire was an item which requested each subject to express the extent to which he was persuaded by the speaker who won his vote. There were three possible choices in the item: "agree strongly," "agree moderately," and "agree mildly." These alternatives were assigned respective numerical values of 3,2,and 1. The mean scores of the six "Quartile-Voting Groups" computed on this basis are presented in Table XV.

¹⁹ Rokeach, op. cit., p. 213.

TABLE XV
COMPARISON OF DEGREES OF PERSUASION
BY QUARTILE VOTING GROUPS

Group	Number of Subjects	Mean Degree of Persuasion	p*
Q 1 v. f. "high"	7	2.43	.01
Q 1 v. f. "low"	16	2.25	.05
Q 2 & 3 v. f. "high"	14	2.14	.20 < .10
Q 2 & 3 v. f. "low"	16	2.36	.01
Q 4 v. f. "high"	10	2.50	.01
Q 4 v. f. "low"	5	1.60	

* P scores indicate the level of confidence for the significance of the difference between the adjacent "Degree of Persuasion" score and that of "Q 4 v. f. 'low.'" "

"F" test analysis of the mean "Degrees of Persuasion" presented in Table XVI revealed a difference among the groups taken as a whole which approached the .05 level of confidence ($F = 2.31$, $.05 = 2.37$). "t" tests between the various groups established that the mean score of quartile 4 voting for the "low" speaker was, with two exceptions, below all others at the .01 level of significance. There were no significant differences between the other groups. If further investigation proves this to be a regular phenomenon it would seem that when listeners evidencing "high" dogmatism are persuaded by speakers of "low" dogmatism they are persuaded less strongly than are "high" dogmatism listeners

when persuaded by speakers of similar personality structure. If the theory of ethos advanced in Chapter I is correct, the explanation offered above would appear to be sound. It would seem that some factor caused the "high" audience members expressing a preference for the contentions of the "low" speaker to vote for him in spite of conflicting personality structures. In terms of the central hypothesis of this study this lack of personality congruity would be presumed to reduce the "low" speaker's ethos as perceived by "high" audience members. Thus, when "high" subjects voted across personality lines they could be expected to be less persuaded than when voting for a speaker with the "built-in" advantage of similar personality structure.

Reasons for subject decisions. Item #3 on the post-debate questionnaire requested the subject to, "Briefly state the reason for your decision and the grade you gave the speakers." In response to this item most subjects gave more than one reason.²⁰ The writer examined each of the responses attempting to discover the most prominent justifications and found six distinct categories. These categories with an example of each are presented below:

- (1) Delivery. "The first speaker spoke directly to me. I like that kind of speaker."

²⁰In cases of more than one "reason" the first was selected unless the subject indicated another was more important.

- (2) Evidence - logic. "The second speaker had more facts and made a logical argument from them."
- (3) Organization. "It was so easy to follow the second speaker. You knew exactly where he was going."
- (4) Adopts argument. "I agree with the second speaker. It is essential that we have the R. B. 70 for limited wars."
- (5) Critical of other. "The second speaker just didn't present any arguments that held water."
- (6) Uncertain. "I just liked the second speaker more. Cant (sic) say exactly why."

Table XVII presents the frequency of each of these responses as employed by the extreme "Quartile-Voting Groups."

TABLE XVI

FREQUENCY OF OCCURRENCE OF EACH OF SIX REASONS
FOR DECISIONS BY EXTREME "QUARTILE VOTING GROUPS"

Group	Reasons Given For Decision					
	Deliv- ery	Evidence- Logic	Organ- iza- tion	Adopts Argu- ment	Criti- cal of Others	Uncer- tain
Q 1 v.f. "low"	3	7				5
Q 1 v.f. "high"	2	2	2			1
Q 4 v.f. "low"			1	3	1	
Q 4 v.f. "high"	3	2		4	1	

Table XVI includes some data that coincide with observations made by Rokeach. The fact that only "low" subjects admit they are uncertain of their reasons for preferring one speaker would seem to support Rokeach's findings

that, "open-minded individuals are more likely to admit ambivalence than are closed minded persons."²¹ In like fashion the exclusive use by quartile 4 of the "adopts argument" and "critical of other" justifications fits well with Rokeach's belief that more dogmatic individuals are more inclined to judge other individuals on the basis of whether or not the individual being judged agrees with the beliefs adhered to by the person passing judgment.²²

Beyond these two instances Table XVI contains little or no information which would indicate striking differences between the "reasons for decision" reported by the various "Quartile-Voting Groups."

Speaker grades. Table XVII contains a breakdown of the grades given the debators by the members of the extreme "Quartile Voting Groups."

TABLE XVII

SPEAKER GRADES ASSIGNED BY EXTREME "QUARTILE VOTING GROUPS"

Group	Assigned Same Grade to Both	Assigned Higher Grade to Speaker Receiving Vote
Q 1 v.f. "low"	7	9
Q 1 v.f. "high"	2	5
Q 4 v.f. "low"		5
Q 4 v.f. "high"	4	5

²¹See Rokeach, op. cit., pp. 357-59. ²²Ibid., p. 56.

The subjects were rather generous to the speakers. Only one audience member graded a speaker as low as "B-." The average grade given by each group ranged from 3.5 to 3.71 on a four point scale. The one obvious difference between "Quartile-Voting Groups" reported in Table XVIII lies in the failure of any member of quartile 4 voting for the "low" speaker to assign the same grade to both speakers. This is yet another instance in which this group has shown a marked difference from the other segments of the population. (As has been shown earlier, "Quartile 4 voting for 'low'" had the highest of all "general defense knowledge" scores, reported the lowest "degree of persuasion," and contained three of the four subjects who changed a pre-debate opinion in the direction advocated by a speaker from the opposite extreme quartile.)²³ This interesting behavior may be the product of the specific debate situation created for this study. On the other hand, these may be the results of some factor within the closed belief-disbelief system which is affected when the individual scoring high on the dogmatism scale is persuaded by a low scoring speaker. At any rate, the behavior of this group presents another possibility for future research.

²³ See supra, pp. 93, 96, and 99.

Analysis of Central Hypothesis

Breakdown by mean dogmatism scores. If, as is maintained in the central hypothesis of this study, individuals will tend to be persuaded by speakers whose personality structure is most similar to that of the listener, it would be expected that the mean dogmatism score of subjects voting for the "high" speaker would be higher than that of subjects voting for the "low" speaker. To test this supposition a hypothesis concerning the mean dogmatism scores of subjects voting for each speaker was constructed.

The mean dogmatism score of subjects voting for the "high" speaker will be significantly higher than the mean dogmatism score of subjects voting for the "low" speaker.

Table XVIII presents the mean dogmatism scores of the subjects voting for each of the speakers of Debate II and the results of the "t" test employed to evaluate the hypothesis concerning these scores.

TABLE XVIII

COMPARISON OF MEAN DOGMATISM SCORES OF SUBJECTS
VOTING FOR THE "HIGH" AND "LOW" SPEAKER

	No. of Subjects	Mean Dogma- tism Score	Differ- ence	"t"	p*
"High" Speaker	31	154.74			
"Low" Speaker	37	139.65	15.09	2.66	.005

* Results are one-tailed.

The "t" test of the 15.09 point difference between the mean scores of the two voting groups revealed that a variance this large and in the hypothesized direction would arise by chance only one out of two hundred times. The hypothesis was accepted. The data of Table XIX indicate that audience subjects in Debate II tended to vote for the speaker whose personality structure was most similar to their own. The data are thus considered confirmatory to the experimental hypothesis of this study.

Distribution of voting by dogmatism score quartiles.

Table XIX presents the vote for the speakers as it was distributed among the dogmatism score quartiles.

TABLE XIX

DISTRIBUTION OF DEBATE VOTES BY DOGMATISM SCORE QUARTILES

Voting For	No. of Subjects From			Totals
	Quartile 1	Quartiles 2 & 3	Quartile 4	
"Low" Speaker	16 (121.38)*	16 (146.75)	5 (175.40)	37
"High" Speaker	7 (125.29)	14 (147.28)	10 (183.70)	31

* Numbers in parenthesis indicate mean dogmatism score of cell group.

The important features of Table XIX are found in the distribution of votes from the low quartile, 1, and the high quartile, 4. More than twice as many subjects from quartile 1 voted for the "low" speaker while exactly twice as many of

the quartile 4 subjects voted for the "high" speaker. Again, the indications are that subjects tended to vote in the direction predicted by the central hypothesis.²⁴

Another interesting finding presented in Table XIX is that within each quartile the mean dogmatism score of subjects voting for the "low" speaker is lower than that of subjects voting for the "high" speaker. Though none of these differences is significant, all are in the predicted direction.

"Chi Square" analysis of voting distribution. In Debate II 33.82 per cent of the audience had dogmatism scores in the first quartile while 44.12 and 22.06 per cent of the subjects represented the two combined medial quartiles and the fourth quartile respectively. If the distribution of votes from each of these groups would have occurred on a random basis each speaker would have received one-half of the votes from each quartile. However, Table XIX²⁵ indicates that subjects from the two extreme quartiles showed a strong tendency to vote for the speaker with a corresponding personality structure. As the central hypothesis predicts that subjects

²⁴As the central hypothesis of this study predicts that subjects will vote for the speaker with the most similar personality structure the phrase "voting in the predicted direction" will be employed throughout the remainder of this report to indicate votes cast for speakers with dogmatism scores most like those of the voters, i.e., votes cast by quartile 1 subjects for the "low" speaker. The phrase "unpredicted direction" will indicate votes cast for speakers from the opposite quartile, i.e., quartile 4 voting for the "low" speaker.

²⁵Supra, p. 105.

will tend to vote for the speaker whose personality structure is most similar to their own, the following null hypothesis was formulated to test the significance of the difference between the recorded voting distribution and that which would have occurred by chance.

The distribution of votes from the subject dogmatism score quartiles between the two speakers will not be significantly different from that distribution which would have occurred by chance.

As the "Chi Square" test of "goodness of fit" is a device specifically designed to measure the significance of difference between observed and expected distributions, it was applied to the data presented in Table XX in order to test the above null hypothesis. When corrected by the Yates correction for continuity, the resulting X^2 score of 4.90 was significant between the .10 and .05 levels of confidence. Though these results do not justify the rejection of the null hypothesis, they do indicate that the tendency for subjects in the first and fourth quartiles to vote for speakers of similar personality structure resulted in a distribution of votes which could be expected to arise only five to ten times out of 100 random voting distributions.

Summary of analysis of central hypothesis. By and large, the data presented in the analysis of the central hypothesis tend to confirm the prediction that individuals witnessing a debate in which the competing speakers are

equal in all major variables excepting personality structure will tend to vote for the speaker whose personality structure most closely resembles their own.

The specific conclusions and implications which can be drawn from this data will be discussed in detail in the final chapter.

Results From Debate I

As indicated in Chapter III, the performance of one speaker in the first debate was greatly superior to that of his opposition. Thus, results from this debate could not be considered in the direct analysis of this study's central hypothesis. Some information derived from Debate I is interesting, however, and is presented below.

"Quartile-Voting Groups," Debate I. Table XX presents the distribution of votes cast in Debate I as classified by the "Quartile-Voting Group" method.

TABLE XX

QUARTILE-VOTING DISTRIBUTION OF DEBATE I

Quartile Voting Group	Number of Subjects	Percentage of Quartile	Mean Dogmatism Score
Q 1 v.f. "low"	19	100.00	122.87
Q 1 v.f. "high"	--	--	
Q 2 & 3 v.f. "low"	29	85.29	144.29
Q 2 & 3 v.f. "high"	5	14.71	155.00
Q 4 v.f. "low"	18	81.82	183.22
Q 4 v.f. "high"	4	18.18	189.50

A glance at Table XXI discloses that even in the unevenly matched Debate I (The total vote was 66 to 9 in favor of the "low" speaker.) the patterns developed which were quite similar to trends described in the discussion of the second debate. First, the percentage of subjects from each quartile who voted for the "high" speaker increases as the degree of dogmatism increases. This would indicate that the possibility that a subject would vote for the losing "high" speaker increased as dogmatism scores rose. Particularly impressing is the finding that while no audience member from the lowest quartile voted for the "high" speaker, 18.18 per cent ($N = 4$) of the highest quartile decided in his favor. Of course, the opposite of this trend is also true; the probability that a subject voted for the "low" speaker increases as subject dogmatism decreases.

The second similarity between voting-dogmatism patterns in the first and second debates is found in the mean dogmatism scores of the voting groups within each quartile. As was the case with Debate II, there is a small difference between the mean scores of each quartile's two voting groups, and in every case the mean score of the subjects voting for the "high" speaker is higher than that of subjects voting for the "low" communicator.²⁶

²⁶ There is the obvious exception here--the first quartile in Debate I which voted unanimously for the "low" speaker.

Perhaps even more important than the similarity of trends discovered above are the results contained in Table XXI.

TABLE XXI

COMPARISON OF MEAN DOGMATISM SCORES OF SUBJECTS VOTING FOR THE "HIGH" AND "LOW" SPEAKERS, DEBATE I

Subjects Voting For	Number of Subjects	Mean Dogma- tism Score	Difference
"High" Speaker	9	167.11	21.59
"Low" Speaker	57	145.52	

No "t" test was performed on the difference between these means. Previous comparisons indicate, however, that a difference as large as 27.59 would probably prove significant.

Summary of results from Debate I. Although the imbalance of speech performances between the two speakers prevented the use of results from Debate I in the direct analysis of the central hypothesis, the data from the first debate correlates highly with that of Debate II. Even when marked superiority characterized one speaker there are strong indications that congruity and contrast of personality structure may well have played a significant role in determining voting behavior.

III. RESULTS OF "SEMANTIC DIFFERENTIALS"

The "Semantic Differentials" employed in this study were designed to serve a triple purpose. First, it was hoped they would provide a check upon the contention of Maslow, Fromm, Hoffer, Adorno, and Rokeach²⁷ that personality structure strongly influences an individual's perceptions of people and objects. Second, if this contention is true, the "Semantic Differentials" might offer some clue as to how the "high" and "low" subjects of the population differed in their perceptions of the speakers to which they were exposed. Third, the "Semantic Differentials" offer another method of evaluating the central hypothesis.

Design of the "Differentials."²⁸ Two semantic differentials were designed for use in this study. One measure was conceived to tap subject responses to each of the speakers. The other was constructed to gauge reactions to the R. B. 70.²⁹ Both devices were contrived in the same general pattern. The

²⁷See supra, pp. 37-38.

²⁸The complete differentials employed in this study are duplicated in Appendix F.

²⁹To avoid confusion between the "subjects" who comprise the population and the speakers and R. B. 70 which are the "subjects" in the grammatical sense--of audience responses recorded in the "Semantic Differentials" the subject of each differential will be referred to as the "stimulus." Throughout the following discussion the differential for which the speakers serve as stimuli will be identified as the "Speaker Differential." The scale for which the R. B. 70 serves as stimulus will be called the "R. B. 70 Differential."

paired terms of each item within the two scales were comprised of one "affirmative" and one "negative" term. Hence the first item in the "R. B. 70 Differential" is:

"1. Effective ____: ____: ____: ____: ____: ____: ____: ineffective."

while the first item in the "Speaker Differential" is:

"1. Logical ____: ____: ____: ____: ____: ____: ____: illogical."

For purposes of statistical presentation, each of the seven spaces between the paired terms of the items was assigned a numerical value. Seven (7) was assigned to the space nearest the "affirmative" term and from this point the values run down in single unit steps until one (1) which was assigned to the space adjacent to the "negative" term. Using this method four (4) was assumed to be a neutral response with three degrees of "negative" or "affirmative" opinion on either side. Although responses above and below the midpoint (4) indicate general "affirmative" or "negative" reactions to the particular stimulus, they also serve to locate the stimulus in terms of the continuum of meaning established by the two alternatives. Thus, when a subject marked the sixth space of item #1 of the "Speaker Differential" it would indicate the respondent considered the stimulus speaker rather logical. If, on the other hand, the second space was marked, the subject would have perceived the speaker as rather illogical.

Results of the various differentials are reported in terms of the voting groups from the two extreme quartiles.

The mean score for each item in the "Semantic Differentials" are included in the tables to follow; however, must discussions will deal with the average of each "Quartile-Voting Group's" responses to all of the items of the particular scale being considered. This average shall be referred to as the "Mean Semantic Differential Score." In the tables to follow the "Mean Semantic Differential" will be indicated by the standard symbol for mean, \bar{X} .³⁰

Hypothesis concerning "Semantic Differential Results."

The theories outlined in the opening chapter of this investigation plus those of Duns and Rokeach combined to provide the basis for three hypotheses which serve as a framework for the analysis of the "Semantic Differentials." These hypotheses along with their theoretical bases are as follows:

- 1.) If the "Semantic Differentials" designed for this study are accurate measures, it follows that preference for one speaker over another will be reflected in the "Mean Semantic Differential Scores."

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The great difference between the speakers of Debate I made the results of "Semantic Differentials" from that session inapplicable to the purposes for which they were designed. Thus semantic differential results from Debate II only will be considered here. Summaries of the results from Debate I are presented in Appendix F.

The "Mean Semantic Differential Score" of the speaker receiving the votes of each "Quartile-Voting Group" will be higher than the "Mean Semantic Differential Score" given to the speaker who failed to receive the votes of the same group.

2.) If, as was indicated by the analysis of the central hypothesis of this study, congruity of personality structure predisposes audience members to vote for a particular speaker, it would seem that subjects who failed to vote in the predicted direction would experience some conflict in that they voted against a speaker who shared with them a bond of similar belief-disbelief systems. To test this assumption the following hypothesis was formulated.

"Quartile-Voting Groups" voting in the unpredicted directions will grant lower "Mean Semantic Differential Scores" to the speakers receiving their votes than are granted to speakers receiving the votes of subjects voting in the predicted directions.

3.) Rokeach indicates that one of the characteristics of the "open mind" is its greater ability to discriminate, while the "closed mind" is not so sensitive to differences.³¹ Would this contrast result in "open minded" members of a debate audience perceiving greater differences between speakers than are detected by "close minded" auditors? It was hoped that a partial answer to this question would be provided by analysis of the following hypothesis:

³¹ Rokeach, op. cit., pp. 37-39.

The "Mean Semantic Differential Scores" of voting groups from quartile 1 will be characterized by greater variation than the variation of "Mean Semantic Differential Scores" of voting groups from quartile 4.

These hypotheses were tested by comparison of the results of the "Speaker Differentials" from Debate II. These results may be found in Table XXII.

Analysis of "Speaker Differential" results. Data presented in Table XXII indicate that on face value all three hypotheses concerning the results of subject responses to the "Speaker Differentials" were confirmed. In regard to the first hypothesis all "Quartile-Voting Groups" granted higher "Mean Semantic Differential Scores" to the speaker who received their votes than they granted to the speaker who failed to gain their decision. Table XXIII presents the comparison of these scores.

TABLE XXII

RESULTS OF "SPEAKER SEMANTIC DIFFERENTIALS," DEBATE II

Item	Low Speaker				High Speaker			
	Q 1 Voting for "Low"	Q 4 Voting for "Low"	Q 1 Voting for "High"	Q 4 Voting for "High"	Q 1 Voting for "Low"	Q 4 Voting for "Low"	Q 1 Voting for "High"	Q 4 Voting for "High"
1. Logical- Illogical	6.40	5.80	5.28	5.67	4.80	5.40	6.14	6.22
2. Believable- Unbelievable	6.53	5.40	5.57	5.89	5.07	5.40	6.00	6.55
3. Convincing Unconvincing	5.80	5.80	4.43	5.44	4.20	3.80	6.14	6.33
4. Factual- Emotional	6.07	4.40	5.86	6.22	3.86	4.60	5.28	4.46
5. Lucid- Obscure	6.07	5.00	4.50	5.56	4.93	4.60	4.71	5.89
6. Aggressive- Defensive	5.20	4.40	5.29	4.78	3.60	3.60	4.00	5.88
7. Strong- Weak	5.73	5.80	5.29	5.00	4.60	4.40	4.17	6.33
8. Open-Minded Dogmatic	4.52	4.80	3.57	3.78	3.53	4.40	4.57	3.55
9. Likable- Repulsive	6.27	5.60	5.29	6.44	5.47	5.60	6.00	6.78
10. Like Me- Unlike Me	4.20	4.00	3.14	4.33	3.60	3.80	5.00	4.89
\bar{X}	5.68	5.10	4.82	5.31	4.36	4.56	5.20	5.69

TABLE XXIII

COMPARISON OF "MEAN SEMANTIC DIFFERENTIAL SCORES"
OF SPEAKERS RECEIVING AND FAILING TO RECEIVE
THE DEBATE DECISIONS OF EACH "QUARTILE-VOTING GROUP"

Mean Score For	Q 1***	Q 1	Q 4	Q 4
	v.f. "Low"	v.f. "High"	v.f. "Low"	v.f. "High"
Speaker receiving vote	5.68	5.20	5.10	5.69
Speaker failing to receive vote	4.36	4.82	4.56	5.31

***Significant at .01 from all other groups.

The second hypothesis predicted that subjects voting in the unpredicted directions would grant lower "Mean Semantic Differential Scores" to the speakers receiving their decisions than would be granted by subjects voting in the predicted direction. Table XXIV presents the scores relating to this hypothesis.

TABLE XXIV

COMPARISON OF "MEAN SEMANTIC DIFFERENTIAL SCORES" OF SPEAKERS RECEIVING THE VOTES
OF PREDICTED AND UNPREDICTED VOTING GROUPS

Direction of Vote	Vote For	
	"Low" Speaker	"High" Speaker
Predicted \bar{X}	5.68	5.69
Unpredicted \bar{X}	5.10	5.20

* "Mean Semantic Differential Score"

In both cases the unpredicted mean scores were in the direction predicted by the hypothesis. Neither of the differences is significant at the .05 level; however, this is not unexpected as all of the scores in Table XXIV were for speakers favored by the voters. The evidence in Table XXIV indicates that subjects voting in the unpredicted direction tended to favor the speaker receiving their vote less than did subjects voting as predicted. A glance at Table XXII will show subjects voting in the unpredicted direction also tended to favor losing speaker more than did subjects voting for the debater whose personality structure was most similar to their own. Taken together these two trends would imply that, even when voting in the unpredicted directions, subjects indicated favorable inclinations toward speakers of similar belief-disbelief systems by reacting less favorably to the speaker receiving their vote and more favorably to the speaker failing to receive their vote than did subjects voting in the predicted directions.

Taking its cue from Rokeach's contention that "open-minded" individuals are more aware of differences than are "closed-minded" persons, the third hypothesis predicted that the "Mean Semantic Differential Scores" of voting groups from quartile 1 would show greater variation than those of voting groups from quartile 4. To test this hypothesis a standard deviation was computed for the average of the "Mean

Semantic Differential Scores" from each quartile. Table XXV presents the results of these computations.

TABLE XXV
COMPARISON OF AVERAGE "MEAN SEMANTIC
DIFFERENTIAL SCORES" BETWEEN
QUARTILE 1 AND QUARTILE 4

Quartile	Average of Mean	
	S.	D. S.
1	5.015	1.019
4	5.165	.418

As a measure of deviation around a mean the difference between the standard deviations of the average "Mean Semantic Differential Scores" indicates subjects from the low quartile reported greater differences between speakers than did subjects from the high quartile.³² To the extent that subjects' reactions recorded in the "Semantic Differentials" actually correspond to perceived differences the data of Table XXV support Rokeach's belief that "open minded" individuals discriminate more than "closed minded" persons. In

³² This result must be viewed with considerable caution for the average "Mean Semantic Differential Scores" are several steps removed from the raw data. In fact they are averages of the average scores of four groups which are in turn averages of the ten average item scores of each group which are the averages of the several individual group members' scores on that particular item.

particular Table XXV provides evidence that the general superiority of low dogmatics' discriminatory powers is reflected in the differences they perceived between a high dogmatic and low dogmatic speaker.

Results of "R. B. 70 Differentials." The results of subject reaction recorded in the "R. B. 70 Differential" are reported in Table XXVI.

TABLE XXVI
RESULTS OF R. B. 70 DIFFERENTIAL, DEBATE II

Item	The R. B. 70 as Responded to by			
	Q 1 v. f. "Low"	Q 1 v. f. "High"	Q 4 v. f. "Low"	Q 4 v. f. "High"
1. Effective vs. ineffective	3.46	5.57	4.20	5.67
2. Invulnerable vs. vulnerable	1.86	3.14	3.60	3.33
3. Timely vs. obsolete	2.84	5.28	3.60	5.22
4. Powerful vs. weak	4.38	5.71	3.60	6.44
5. Hard vs. soft	4.46	5.42	4.60	5.00
6. Aggressive vs. defensive	2.79	3.80	4.40	4.44
\bar{X}	3.44	4.88	4.00	5.27

Recalling that the "low" speaker in Debate II opposed the "crash program" to develop the R. B. 70 while the "high" speaker argued for such a program, there are indications in Table XXVI³³ that even when subjects responded to a "Semantic Differential" for which an airplane served as stimulus, the relationship between audience member and speaker personality structure were reflected. For example, even when their impressions of the R. B. 70 were gained from listening to the same speeches, subjects from quartile one who voted against the crash program (for the "low" speaker) were negatively impressed by the weapon (M. S. D. = 3.44) while subjects from quartile four voting in the same direction responded entrally (M. S. D. = 4.00). In a similar fashion subjects from quartile four who voted in favor of the crash program were more favorable disposed to the R. B. 70 (M. S. D. = 5.27) than were subjects from quartile one who voted in the same direction (M. S. D. = 4.88). Though significance of difference ratings were not computed for these scores, their perfect reflection of results reported in Table XXIV;³⁴ and the discussion which followed lend strong credence to the

³³ A matrix of the significance of difference between the "Mean Semantic Differential Scores" recorded on the "Speaker Differentials" from Debate II is included in Appendix E.

³⁴ See supra, p. 117.

possibility that congruity or conflict between audience and speaker personality structures were at the root of the response patterns just discussed.

The specific implications and conclusions which can be drawn from the results of both Speaker and R. B. 70 Semantic Differentials will be discussed in the next chapter.

CHAPTER V

SUMMARY AND CONCLUSIONS

As originally stated, the general aim of this study was to ". . . more fully explain the nature and functioning of ethos in an actual speech situation."¹ Basic to the method employed herein was the close connection which seemed to exist between the ancient rhetorical concept of ethos and the contemporary psychological concepts of personality structure and its social manifestations. Rhetoricians explained that ethos was that portion of the speaker's personal nature which inclined the audience to accept or reject him as a man of character, sagacity, and good will. Personality theory, particularly that portion dealing with authoritarianism, appeared to offer a possible explanation of the psychological factors resulting in the acceptance or rejection of the speaker as a man worthy of belief.

The synthesis of rhetorical thought concerning ethos and psychological literature dealing with authoritarianism led to the formulation of a theory in which ethos was seen as a product of the interaction personality structures of speaker and audience members. Stated in the form of a hypothesis, this theory became:

¹Supra, p. 5.

Ethos will increase and decrease to the extent that the speaker's and audience member's personality structures are similar or dissimilar.

In order to evaluate this theory two experimental debates were conducted. In these debates the personality structures of speakers and audience members who were to judge the debates were measured through the use of the Rokeach Dogmatism Scale. Controls were employed in an attempt to assure that debate decisions made by the audience subjects would be based primarily upon the comparative ethos of the speakers to which they were exposed.

In light of the theory of ethos summarized above it was hypothesized that subjects in the audience of each debate would tend to be persuaded by the speaker whose personality structure was most similar to their own..

The following are the specific conclusions drawn from the results of these debates as reported in Chapter IV.

I. SPECIFIC CONCLUSIONS

Analysis of central hypothesis.² The mean dogmatism score of subjects of Debate II who had voted for the "high" and "low" speaker were tested for significance of difference. The results of this analysis revealed that the mean score of subjects voting for the "high" speaker was very significantly

²Unless otherwise indicated all discussion in this chapter will relate to results obtained from Debate II.

higher than the mean score of subjects voting for the "low" speaker ($P = .05$).

"Chi Square" analysis of the distribution of votes for the two speakers from the dogmatism score quartiles demonstrated that the tendency for subjects from the high (fourth) quartile to vote for the "high" speaker and for subjects from the low (first) quartile to vote for the "low" speaker resulted in a voting distribution which approached significant deviation from that which would be expected by chance. ($P = .10 < .05$).

Even in the first debate, in which controls broke down and the "low" speaker was greatly superior to his "high" opposition, analogous results were produced. The mean dogmatism score of subjects voting for the "high" speaker ($N = 9$) was 21.59 higher than that of subjects voting for the "low" speaker ($N = 57$). When the votes for each speaker were classified in terms of the dogmatism score quartile placement of the subjects casting the votes it was discovered that an increasing percentage of subjects voted for the "high" speaker as subject dogmatism rose. ($Q\ 1 = 0\%$, $Q\ 2$ and $3 = 14.71\%$, $Q\ 4 = 18.18\%$.) Though the small number of subjects who voted for the "high" speaker ($N = 9$) prevented statistical treatment of these results, data from Debate I reflected the trends found significant in the second experimental session.

All things considered, there is sufficient evidence to establish that, within the limited context of this study,³ that subjects tended to be persuaded by speakers whose personality structure was most similar to their own. To the extent that controls succeeded in making comparative ethos the primary basis for subject debate decisions it can be concluded that ethos was the result of the interaction of speaker and audience member personality structures, and that ethos increased or decreased to the extent that speaker and audience member personality structures were similar or dissimilar.

Further evidence concerning the central hypothesis of this study will be considered from time to time in the remainder of Chapter V.

Pre-debate questionnaire. The significant difference between the high "General Defense Knowledge" score of subjects from quartile 4 who voted for the "low" speaker and groups voting in the predicted directions, plus the similar but not quite significant, difference between quartile 1 subjects who voted in the unpredicted direction and the predicted groups seem to indicate that subjects with more knowledge of the general area of national defense were less

³This conclusion is based primarily upon data from Debate II.

influenced by personality structure similarity than were less knowledgeable subjects. In fact, data from the pre-debate questionnaire would seem to indicate that audience members with the greatest defense information tended to vote for the speaker whose personality was least similar to their own.

The small number of subjects who voted in the unpredicted directions ($N = 12$) does not allow specific conclusions to be drawn, however, there is ample evidence to believe that the voting behavior of subjects with greater defense information was consistently different than their less informed counterparts. Further research with more "sophisticated" pre- and post-debate instruments might serve to clarify the nature of this behavior.

Responses to the item concerning pre-debate opinion of the R. B. 70 indicated that the "low" speaker enjoyed the advantage of the majority of the opinion which existed before the debate. The fact that three members of Quartile 1 agreed with the position advocated by the "low" speaker prior to the debate and eventually cast their votes for him may have had some effect upon the manner in which the votes from Quartile 1 were distributed. Yet, even without these three subjects the mean dogmatism score of subjects voting for the "low" speaker would still have been significantly below that of subjects voting for the "high" speaker. Thus, it would seem

opinions existing before the debate may have influenced the outcome of the contest in terms of which speaker received the majority of the votes cast by the audience, but, there is little indication that this opinion had any important influence on the mean dogmatism scores of subject groups voting for either speaker.

Post-debate questionnaire. Three items in the post-debate questionnaire provided information collateral to the evaluation of the central hypothesis. Subjects from Quartile 4 voting for the "low" speaker were significantly less persuaded than were any of the other groups, ("P" ranged from .01 to .05.) and diverged from the other Quartile Voting Groups in being the only one which failed to contain some members who granted the same letter grade to both speakers. The almost constant difference between members of Quartile 4 who voted for the "low" speaker and other groups leads to the conclusion that some factor operated within its membership to cause this phenomenon. Whether this factor was the result of conflict caused by their choosing to vote for a speaker with a dissimilar personality structure, their high degree of defense knowledge, or some other element of the experimental situation cannot be determined. Research into the behavior of persons persuaded by speakers of dissimilar personality structure could serve to resolve this question

and would, perhaps, cast light on the general social behavior of individuals during contact with personality "opposites."

The only subjects admitting they were uncertain as to why they voted as they did were from the low quartile. This can be viewed as supporting Rokeach's belief that the low dogmatic more readily admits ambivalence. The fact that the only subjects who claimed to have based their decisions on agreement or disagreement with a particular idea advanced by one or the other speaker were from Quartile 4 seems to add further credence to another finding presented by Rokeach; that high dogmatics are more likely to judge individuals by what they believe than are low dogmatics.

"Semantic Differentials." The results of the "Semantic Differentials" were replete with evidence that the relationship between audience member and speaker personality structures effected the manner in which subjects reacted to the speakers. The following facts all tend to indicate that ethos, as it operated in Debate II increased and decreased to the extent that speaker and audience member personality structures were congruent:

1. The highest (most affirmative) "Mean Semantic Differential Scores" were those accorded to speakers receiving the votes of subjects voting in the predicted directions.

2. Quartile Voting Groups voting in the unpredicted directions did not favor the speaker receiving their decision so much as did the predicted groups.
3. Quartile Voting Groups voting in the unpredicted directions favored the speaker who failed to receive their votes more than the predicted groups.
4. Almost as if they were responding to the speakers rather than an airplane, the same patterns reported in items 1, 2, and 3 were repeated in relation to the R. B. 70.

Though few of the differences between "Mean Semantic Differential Scores" were statistically significant, every voting group demonstrated some form of relative favoritism to the speaker whose personality structure was most similar to their own. Assuming the adequacy of controls, it can be concluded that any reported favoritism arose from ethos. The consistent pattern of subjects favoring speakers of like personality indicates that ethos was determined by the degree of speaker-listener personality structure congruity and thus, the results of the "Semantic Differentials" can be considered as further evidence supporting the central hypothesis of this investigation.

One additional test was conducted upon the results of the "Semantic Differentials," the computation of a standard deviation for the average of the "Mean Semantic Differential

Scores" from the voting groups from each of the extreme quartiles. This process disclosed that the standard deviation of the low quartile was more than twice as large as that of the opposite group ($Q\ 1 = 1.019$, $Q\ 4 = .418$). These figures support Rokeach in his finding that low dogmatics discriminate more than do high dogmatics.

Additional relationships. Analysis of the relationship between dogmatism scores and verbal reasoning, predicted speech grades, religious affiliation, sex, undergraduate classes, and academic majors disclosed few differences significant at the .05 level. Rokeach's hypothesis that the Dogmatism Scale measures a personality syndrome which cuts across specific areas of ability, interest, and belief finds support in these results. However, the significant differences between subjects who indicated a political preference and those who did not is contrary to the results of previous studies as is the failure to find a significant difference between the mean dogmatism scores of male and female subjects.

II. SUGGESTIONS FOR FURTHER RESEARCH

Due to the tentative nature of this investigation a number of areas of additional research seem worthy of investigation. Several such areas have been indicated at various places in the preceding discussion; the following section will include further suggestions.

1. The tentativeness of this study requires that similar investigations using differing topics and methods will need to be conducted before the relationship between ethos and personality structure can be satisfactorily explained.
2. Studies aimed at determining how similarity or lack of similarity of personality structure is conveyed from speaker to listener should be very valuable. Experiments involving high dogmatics reading manuscripts composed by low dogmatics and vice versa or comparing results of tape recorded and personally delivered addresses could serve to this end.
3. Content analysis of high and low dogmatic communications could further aid in the discovery of the characteristics of each.
4. Part of the argument concerning the effects of competitive debate upon the personalities of participants might be resolved through studies employing the Dogmatism Scale and similar devices.
5. The conflict which seems to be reflected in the behavior of the high subjects who voted for the "low" speaker might serve as a cue to fruitful investigations employing small groups in which there is personality structure dissimilarity between the leader and other members.

6. Investigations of a nature similar to this study using groups with varying degrees of knowledge of the general field from which the debate topic is drawn might cast considerable light upon the conditions under which ethos, pathos, or logos assume a dominant role in audience decision making.
7. The vast amount of data accumulated through the use of the "Semantic Differential" should strongly recommend it as a method of measuring audience reactions in almost any rhetorical investigation.

III. SUMMARY

In summary, the relative congruity between the personality structures of speakers and audience members appears to have had, within the limits of this study, deciding effect upon the ethos of the speakers involved. Evidence presented in the preceding chapters tends to indicate that a speaker will enjoy increased ethos to the extent that his personality structure is similar to that of the audience member perceiving him.

Though the artificial nature of the debates and the small number of subjects involved in this investigation necessarily limit the extent to which its conclusions may be projected into the general speech situation, there does seem to be ample proof to suggest that ethos and personality structure are closely related.

Perhaps even more important than specific conclusions, Duns' final comment concerning his study characterizes the most important feature of this investigation as it relates to ethos and the entire body of rhetorical theory:

. . . it has demonstrated the inseparable relationship between the personality of the speaker, the content of his speech, and the response to his speaking by the audience.⁴

⁴ Donald Frederick Duns, "A Study of the Relationship Between Dogmatism and Speech Behavior" (unpublished Doctoral dissertation, Northwestern University, Evanston, Illinois, 1961), p. 152.

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APPENDIX A

THE DOGMATISM SCALE AND

GENERAL INFORMATION QUESTIONNAIRE

GENERAL ATTITUDE AND OPINION STUDY

The following is a study of what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one.

Mark A 1 If You Agree Strongly

Mark A 2 If You Agree Moderately

Mark A 3 If You Agree Slightly

Mark A 4 If You Disagree Slightly

Mark A 5 If You Disagree Moderately

Mark A 6 If You Disagree Strongly

Attached to the back of this study is a general information sheet. Please answer all questions as accurately as possible. All answers on the information sheet and other parts of the study will be strictly confidential. Your name will be used only for purposes of identification.

Mark a 1 if you agree strongly with the statement.
Mark a 2 if you agree moderately with the statement.
Mark a 3 if you agree slightly with the statement.
Mark a 4 if you disagree slightly with the statement.
Mark a 5 if you disagree moderately with the statement.
Mark a 6 if you disagree strongly with the statement.

- _____ 1. The United States and Russia have just about nothing in common.
- _____ 2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.
- _____ 3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.
- _____ 4. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.
- _____ 5. Man on his own is a helpless and miserable creature.
- _____ 6. Fundamentally, the world we live in is a pretty lonesome place.
- _____ 7. Most people just don't give a "damn" for others.
- _____ 8. I'd like it if I could find someone who would tell me how to solve my personal problems.
- _____ 9. It is only natural for a person to be rather fearful of the future.
- _____ 10. There is so much to be done and so little time to do it in.
- _____ 11. Once I get wound up in a heated discussion I just can't stop.
- _____ 12. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.
- _____ 13. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.

Mark a 1 if you agree strongly with the statement.
Mark a 2 if you agree moderately with the statement.
Mark a 3 if you agree slightly with the statement.
Mark a 4 if you disagree slightly with the statement.
Mark a 5 if you disagree moderately with the statement.
Mark a 6 if you disagree strongly with the statement.

- _____ 14. It is better to be a dead hero than to be a live coward.
- _____ 15. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.
- _____ 16. The main thing in life is for a person to want to do something important.
- _____ 17. If given the chance I would like to do something of great benefit to the world.
- _____ 18. In the history of mankind there have probably been just a handful of really great thinkers.
- _____ 19. There are a number of people I have come to hate because of the things they stand for.
- _____ 20. A man who does not believe in some great cause has not really lived.
- _____ 21. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.
- _____ 22. Of all the different philosophies which exist in this world there is probably only one which is correct.
- _____ 23. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.
- _____ 24. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.
- _____ 25. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.
- _____ 26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.

Mark a 1 if you agree strongly with the statement.
Mark a 2 if you agree moderately with the statement.
Mark a 3 if you agree slightly with the statement.
Mark a 4 if you disagree slightly with the statement.
Mark a 5 if you disagree moderately with the statement.
Mark a 6 if you disagree strongly with the statement.

- _____ 27. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.
- _____ 28. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposite camp.
- _____ 29. A group which tolerates too much differences of opinion among its own members cannot exist for long.
- _____ 30. There are two kinds of people in this world: those who are for the truth and those who are against the truth.
- _____ 31. My blood boils whenever a person stubbornly refuses to admit he's wrong.
- _____ 32. A person who thinks primarily of his own happiness is beneath contempt.
- _____ 33. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.
- _____ 34. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.
- _____ 35. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.
- _____ 36. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.
- _____ 37. The present is all too often full of unhappiness. It is only the future that counts.
- _____ 38. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all."

Mark a 1 if you agree strongly with the statement.
Mark a 2 if you agree moderately with the statement.
Mark a 3 if you agree slightly with the statement.
Mark a 4 if you disagree slightly with the statement.
Mark a 5 if you disagree moderately with the statement.
Mark a 6 if you disagree strongly with the statement.

- _____ 39. Unfortunately, a good many people with whom I
have discussed important social and moral
problems don't really understand what's going on.
- _____ 40. Most people just don't know what's good for them.

This is the final page of the survey. Before you complete this page, please recheck your answers to make sure that you have answered all of the questions on the preceding pages.

Fill in the proper answers:

1. Age _____
2. Sex (circle) M F
3. Classification (circle)
Freshman Sophomore Junior Graduate Special Auditor
4. Major _____
5. Do you have a religious preference? (Circle) Yes No
If the answer is yes, would you please indicate what it is? (Specify denomination, if possible.) _____
6. Are you a member of a fraternity or a sorority? (circle)
Yes No If the answer is yes, please name. _____
7. Name of the course in which this survey was taken. _____
8. Do you have a political preference? (Circle) Yes No
If the answer is yes, would you please indicate what it is? _____
9. What do you plan to do after you have completed your education? Describe _____
10. Name _____
11. If you have any comments to make about this questionnaire, please make them below.

Thank you for your cooperation.

APPENDIX B

RELIABILITY COEFFICIENTS AND
REPORT OF SELECTED CORRELATIONS

Reliability Coefficients

The "odd-even" correlations for the Dogmatism Scale are reported in Table XXVII. These are quite similar to those reported by Rokeach¹ and can be assumed to be stable and to represent satisfactory levels. A separate correlation was computed for each of the nine "sections" of "Speech 59" involved in this study.

TABLE XXVII
"ODD-EVEN" RELIABILITY COEFFICIENTS*

"Section"	No. of Subjects	r
1	21	.823
2	16	.752
3	24	.625
4	18	.860
5	13	.820
6	16	.830
7	23	.840
8	20	.923
10	16	.819

*Odd-even correlations are corrected by the Spearman-Brown formula.

¹Milton Rokeach, The Open and Closed Mind (New York: Basic Books, 1960), p. 90.

Correlations Between Dogmatism and Selected Factors

The data reported in Table XXVIII strongly supports the findings of Rokeach and Duns. Rokeach discovered a negative correlation between problem solving reasoning ability.² Duns found small negative correlations between dogmatism and S. A. T. verbal reasoning scores and dogmatism and actual speech grades.³

TABLE XXVIII

CORRELATIONS BETWEEN DOGMATISM AND SELECTED FACTORS

Between dogmatism and verbal reasoning* (N=133)	Between dogmatism and predicted speech grades (N=133)
= -.16**	= -.22***

* between verbal reasoning and predicted speech grades is equal to +.57 significant at .02.

** .10 < .05 level of significance.

*** .01 level of significance.

² Rokeach, op. cit., p. 90.

³ Donald F. Duns, "A Study of the Relationship Between Dogmatism and Speech Behavior" (unpublished Doctoral dissertation, Northwestern University, Evanston, Illinois, 1961), p. 179.

APPENDIX C

"INFORMATION PACKETS"

"Instruction Sheets"

THE R. B. 70: SOME HISTORICAL BACKGROUND

In mid 1950 the U. S. Air Force began to develop plans for a bomber to replace the then experimental B. 52. As fast as the 52 was, advances in air defense and the rapid maturation of sophisticated interceptors in the Russian Air Force demanded that the United States introduce a new manned bomber by sometime in the mid 1960s. That plane was to be the R. B. 70.

The design which emerged from initial planning was a fantastic weapon. Capable of speeds in excess of two and one-half times the speed of sound, possessing a range which would allow it to strike to the heartland of any continent on earth and return with an excess of fuel, with a bomb capacity nearly as large as that of the B. 36 (55,000 lbs.) the R. B. 70 was to be one of the most amazing planes of all times.

However, events of the late 50s gave some military men second thought about the advisability of going ahead with the project. The rapid development of ballistic missiles seemed to outdate the 70 as a retaliatory force, while equally rapid development of Russian anti-aircraft defense, according to these experts, made striking with a manned bomber something worse than a calculated risk.

Defenders of the bomber held that regardless of the sophistication of automatic weapon systems, manned aircraft

were still essential for many of the duties of modern warfare and were we to allow the Russians to draw ahead of us in the development of supersonic bombers we would be making a possibly deadly mistake.

The situation came to a head early this year when the House Armed Services Committee passed a specific appropriation for completion of the 70 ahead of the planned schedule. Defense Secretary McNamara had made it no secret that he felt the bomber was a white elephant which could just as well be allowed to die on the vine.

This dispute divided the American military establishment right down the middle. This coming week you will have a chance to solve the problem.

We are trying to give the students in Speech 59 some good examples of persuasive speaking and have deliberately selected a topic about which they will know little. This was done in an effort to allow them to be able to analyze the techniques used by the speakers without the interference of audience bias.

The following is the format we plan to use:

1. The audience will fill out the first half of a "Shift of Opinion" Ballot.
2. Each speaker will speak for a minimum of seven (7) minutes or a maximum of eight (8) minutes. (These are the time limits on the classroom speeches.)
3. The audience will fill out the second half of the ballot.

Some Things to Remember:

There will be no rebuttal period so you must do your persuading in the seven to eight minutes you have.

This is an audience of college freshmen not debate coaches or judges; thus you can be a bit more free with emotion, and a bit more simple in your presentation.

Dress will be the same as for regular tournament competition.

The winner of each debate will be treated to a steak dinner at "Little Italy" compliments of the Department of Speech.

Use any reasoning you would like, but use only the information and quotations on the attached information sheets.

"Manufactured" Evidence and Instructions to Pro-"Crash Program" Speakers

YOUR BASIC CONTENTION IS AS FOLLOWS:

We must have a crash program to develop the R. B. 70.

THE BASIC ARGUMENTS OF YOUR OPPOSITION WILL BE:

1. Manned bombers are obsolete in major global conflicts.
2. Missiles make our best strike force.
3. By the time the B. 70 is in full production it would be a useless offensive weapon.

TESTIMONY BEFORE THE HOUSE ARMED SERVICES COMMITTEE

"What you must realize is that rockets, no matter how sophisticated, do not solve all of our attack problems. There are some operations that can only be carried out by men who are actually on the scene and can make decisions on the basis of what they can observe. Even the best Atlas cannot strike twice. By this I mean that you can never be sure that a missile is going to detonate just because it got off the launch pad. Any number of a thousand things can go wrong as the missile is subjected to extremes of heat and cold as it leaves and re-enters the atmosphere. You could very well launch a missile at an enemy missile base and find that the warhead was a dud when the enemy missiles began to fall on New York. This just can't happen with a manned bomber like the R. B. 70. Equipped with air to surface missiles, such as the "Sky Bolt," it can stand off several hundred miles from the target and be ready to launch a second missile the moment it becomes apparent that the first attempt failed."

General L. M. Scott, U.S.A.F.

"Let's assume for a minute that our first retaliatory blows were carried by "Polaris," "Minutemen," and "Atlas" missiles. The best calculations at RAND indicate that there would still be work to be done. It is essential that we have immediate follow up for that first strike. A wing of R. B. 70s could make a complete check of every major target in the U.S.S.R. in a very short period. During this time they could assess the damage done by our first strike, complete any jobs left undone, and return with valuable intelligence information."

Ralph Sloan, Research Director Convair Aviation

"No missile likely to be invented can destroy a target and return to its base. And that's just what a manned bomber can do. Its not enough to know that you hit your target. Command headquarters needs much more; what military movements are in evidence in the enemy's heartland, what are the anti-aircraft defenses like, what was the extent of the damage to the target area. In fact, we cannot see any way we can plan second strike strategy intelligently unless there is some way we can learn how our first strike worked. And it seems to me that the R. B. 70 is the only way we can do that."

Gen. Harold Hapheart, Director of Special Planning
U. S. War College

"It has been argued that any manned bomber wouldn't have a chance against anti-aircraft defenses. Its rather serious that a bombing mission wouldn't exactly be a lawn party, but it certainly wouldn't be any pigeon shoot. At this time security restrictions prevent me from revealing the details, but let me make it quiet clear that if we are ever forced to send S.A.C. on the 'real thing,' more than 70% would get through to the targets, if those planes were B. 70s. We have every reason to believe that the percentage could be even higher, and that the return rate (the number of planes that return to home base) would be just as high. It is hard enough for any anti aircraft weapon to hit a target flying 2,000 miles per hour, but its even harder with the types of defense mechanisms which are part of the B. 70 design.

May I point out here that were we forced to use the B. 52s and 47s we are flying today we could only count on about half the success we would be sure of with the R. B. 70. Gentlemen, if you pass up this opportunity to develop this plane fully and in a hurry, you are putting America's defense posture in an extremely awkward position."

General James R. Roland, Commander First Strike Wing
S.A.C.

A missile is a pretty final thing. Once its gone its nearly at its target. Remember if there is ever a false alarm you can call the 70 back, you can't do that with an "Atlas."

Congressman John Evans, Member of Air Force Sub-
Committee of the House Armed Services Committee

"As inhumane as war is, we must nevertheless concentrate our retaliatory attack upon only strategic targets. At present we have no adequate means for reconnoitering a bombed over target area for purposes of determining whether or not a second strike should be launched. Of course, the United States could, without reconnaissance, launch a second missile attack automatically. However, this would obviously result in needless loss of life, millions of lives in fact. So, simply from a humanitarian point of view it would be most beneficial to these millions of innocent people who would bear the brunt of such an attack to carry our second strike in B. 70s. Thus we could employ these second weapons only where they were absolutely essential.

"There can be no doubt that the Soviet Union is developing its own version of the B. 70, and if they are developing this mach three plane similar to the 70 it will completely nullify the combined forces of our B. 52s and 47s. That is why those who oppose the rapid development of the B. 70 take a position which, I believe, places the defense posture of the United States on an extremely dubious basis.

Harold Daves, Research Director, I.B.M.

"Manufactured" Evidence and Instructions Given Anti-"Crash Program" Speakers

YOUR BASIC CONTENTION IS AS FOLLOWS:

It would be foolish to embark upon a crash program to develop a production version of the R. B. 70. There is no need for such a weapons system, etc.

THE BASIC ARGUMENTS OF YOUR OPPOSITION WILL BE:

1. There are some military operations which necessitate the use of manned bombers.
 - a. The R. B. 70 will be able to investigate damages caused by a missile attack and act upon the information it discovers.
 - b. No mechanical system can ever replace the value of human decision.
2. The R. B. 70 will provide America with a more flexible defense posture.
 - a. It can be used in both atomic and limited wars.
 - b. It will increase the number of options the S.A.C. command will have in making a retaliatory strike.
 - c. It will make a perfect launching platform for air-to-ground missiles.

TESTIMONY GIVEN BEFORE THE HOUSE ARMED SERVICES COMMITTEE

"Some people tell you that we need manned planes so they can make an immediate follow-up in case a portion of a first missile strike fails. This just isn't the case. First of all, there is little chance that the missiles will include any failures. If all stages of any given missile ignite properly the chances of its hitting the selected target are better than several thousand to one. Should one of the stages fail to ignite, we receive that information instantaneously, destroy the faulty weapon, and send a second strike on its way all before the enemy even knows the attack is coming."

General Harold B. White, Chief of Research
Third Air Force

"Gentlemen we aren't being asked to appropriate this money for a 1943 war. So, we had better not spent it on 1943 weapon ideas. For no matter how fast it is, there is no hope for a manned bomber to get through to say, Moscow. Considering the top altitudes of the Russian interceptions I think the Iron Curtain is just a little too high to fly over in anything as big as the R. B. 70. The way we're beginning to worry about the success of the Russian anti-missile defense system, it seems a little bit silly to sit around here and discuss the possibility of a manned bomber's getting through. If you don't think the Soviets can shoot the 70 down I suggest you ask Gary Powers. He might be able to give you some information. By the way, a U-2 makes a much smaller target than a R. B. 70."

General Gerald K. Miller, Past Executive Commander
S.A.C.

"Our best estimates tell us the manned plane couldn't get to its target in less than 2 hrs. (And that is the most optimistic estimate.) A ballistic missile can make it in 15 minutes. That time factor seems important to me. Assuming the United States has been attacked, if we are to protect ourselves from a second, third, and even fourth, wave of strikes, we must retaliate with speed and decisiveness. We can do this best with an entirely missile force. In fact, in the time it would take a wing of R. B. 70s to travel to Central Europe a prospective enemy could have launched as many as three additional waves of attacks at the United States."

Horace Korbine, Chief of Research and Development
General Dynamics.

"Our best intelligence information has assured us that the Powers U-2 was probably downed by an infrared homing, ground-to-air missile. You must realize that an infrared anti-aircraft missile homes on the heat created by jet engines. Gentlemen, the speed at which the R. B. 70 would be traveling on a normal bombing run would turn the whole plane into a target for one of these missiles. Normally only the exhaust tube of a jet becomes hot enough to attract an infrared weapon. But, the air friction created by a ship traveling at 2,000 miles per hour would raise every square inch of the plane's surface area to a temperature of approximately 600 degrees centigrade. At this rate not only the exhaust tubes but every inch of this 119 foot flying coffin becomes a perfect invitation for a heat directed infrared anti-aircraft missile. Send 100 B. 70s over New York and my men would shoot down 99 of them even before they came into air-to-surface strike distance."

Colonel George C. Maharas, Chief of Anti-Aircraft
Defenses, Quadrent of New York

"As you gentlemen know R.A.N.D. is on record as opposing the future development of manned bombers, with the exception of small ground-support systems. Large bombers are obsolete today. They will be even more obsolete by 1969 which is the earliest possible date for the full scale production of a fully operational R. B. 70. Our projections of Russian arms development indicate that by that date less than 12% survival rate could be expected from any R. B. 70 strike. All these figures about a 70% survival rate are based on the rather silly process of estimating how a 70 could do against today's Russian defenses. In effect this is saying how well a plane that isn't even flying could do against defenses which will be discarded as useless by the time the plane is actually capable of flying strike missions."

Horace J. Pharland, Air Defense Research Director
R.A.N.D. Corp.

"You have been told today that one of the advantages of the manned bomber is that if we sent it on a strike mission it could be called back if the original decision to strike was a mistake. This seems like a real advantage until you remember that what these people are saying is that you can call a plane back if it was a mistake, but if it wasn't a mistake the plane probably wouldn't make it through to target anyway. At best this seems a rather dubious argument. It's like going to a duel with an empty piston because you think the whole thing might be a misunderstanding.

Admiral K. B. Hamilton

Magazine Articles Included in "Information Packets"

Included in the "information packets" given to speakers advocating the "crash program" were the following magazine articles:

- 1.) Spatz, Carl. "America's B-70 Must Fly," Newsweek, 55:20-21, January 25, 1960.
- 2.) _____. "The Case for the B-70 in an Age of Missiles," Newsweek, 57:34, April 17, 1961.

Speakers arguing for the "crash program" were also given "The B-70 'Valkyrie,'" a 10 page pamphlet published by the Public Relations Division of North American Aviation.

Speakers opposing the "crash program" were given copies of the following periodical articles:

- 1.) "LeMay's Last Stand," The New Republic, 146:3-4, March 29, 1962.
- 2.) "More Important Than Pork," Commonweal, 73:227, March 17, 1961.
- 3.) "Science in the News: Missiles vs. Bombers, Congressional Committees Express Some Doubt," Science, 133:1585-87, May 19, 1961.

APPENDIX D

TRANSCRIPTS OF SPEECHES

DEBATE I

First Speaker, "High," Anti-"Crash Program"

We are living in the age of missiles. The defense of our nation is now associated with such terms as Atlas, Titan, Polaris, and, more recently, anti-missile missiles. My basic contention this morning is that it would be foolish to embark upon a crash program to develop the RB-70 bomber. Let's consider three main areas and explore the objections in these areas in light of possible affirmative arguments. These areas are practicality for secondary use.

First, I would make three things clear, three points of clarification. I am only opposed to a crash program, not an orderly one for the purpose of research only. And secondly, according to the New Republic, and this should be kept in mind, the plane would not be operational until 1970 or 1971. In this fast moving day and age, we should keep this in mind. And thirdly minor uses, other than that which the plane is intended for, can be taken care of without the crash program.

My first area of objection: the RB-70, originally planned beginning in 1950, is outdated and no longer suitable for its original purpose. We must be flexible and adjust to modern warfare technology. This means less emphasis on manned bombers and more emphasis on missiles. The RB-70 isn't appropriate. Quotes from testimony before the House Armed Services Committee:

Gen. Gerald Miller, Executive Commander of SAC, quote, "Gentlemen, we aren't being asked to appropriate money for a 1943 war; we had better not spend it on 1943 weapon ideas."

Horace Korbine, Chief of Research and Development, General Dynamics, "Our best estimates tell us that manned planes couldn't get to its target in less than two hours; a ballistic missile can make it in fifteen minutes. In the time it would take a wing of B-70's (sic) to travel to Central Europe, a prospective enemy could have launched as many as three additional waves of attack on the United States."

Colonel George Maharis, Chief of Anti-Aircraft Defenses, Quandrit (sic), of New York, quote, "Every inch of this one hundred and nineteen foot flying coffin becomes a perfect invitation for a heat directed, infra-red anti-aircraft missile. Send one hundred RB-70's over New York, and my men would shoot down ninety-nine of them even before they came into air to surface strike distance."

Also the New Republic, March, 1962, said, "A Soviet bomber that could intercept the U-2 could certainly reach a larger plane like the RB-70."

From this we can see that the RB (sic) is obsolete and inappropriate for many reasons. The ideal (sic) is outdated. The plane is too slow; missiles are eight times faster. It couldn't penetrate the enemies' defenses. In reality, it would probably never (sic) its target. Also, by 1970, this will be even more true. Remember the Russians are putting most of their resources into the area of missiles and missile defense. We should do the same.

My second area of objection: the cost of the RB-70 is too great, and other areas need the money more desperately. The RB-70 has already devoured over one billion dollars and would ultimately require a total of ten billion dollars in total commit. I propose to you that this money would be more useful if applied toward perfecting our anti-missile system and developing further missile striking ability. Project this belief into 1970, and you can easily see the desirability of spending the money in the age, in the area of missiles. This is the missile age. The Russians realize it. So should we.

Commonweal Magazine in March of 1962, pointed out that motivation for the RB-70 may be based on financial drives. In referring to the RB-70 program and those defending it, this magazine said, "The appetite for defense contracts is literally insatiable (sic). It is indeed a beautiful spectacle to see the republic cutting one another's throats in the name of national defense. The history of this monstrosity is that both the last and present administration have tried to hog-tie it and have succeeded momentarily, but it always gets loose again." The Defense Department, I agree, an orderly program for the development of prototypes is appropriate--perhaps a hundred and eighty million dollars as the Chief of Allocations of the Defense Department requested--but not four hundred and ninety-one million this year alone for proceeding toward the distant goal of mass production. Remember prototypes are useful as links toward bigger and better weapons. Mass produced creatures of obsolescence are good only for mothball fleets.

This plane costs too much. Much would be wasted. The money could be spent in more appropriate areas.

My third objection: the RB-70 is not useful in a superior manner for any of its secondary uses. Let's consider a few.

For transportation, it's not needed. Others are just as good. As a missile carrier it's not needed. We have developed long range ground to ground missiles and Polaris subs for this purpose. For conventional warfare it is not appropriate because conventional warheads can now be used on missiles. None of these areas are (sic) areas of need. We have taken care of them in their own appropriate ways.

The plane is not warranted anyhow at such high cost, if it cannot even fulfill the primary purpose of long range striking ability, and again, as we pointed out, couldn't even get through to the enemy.

In conclusion, we can see that first, this plane is outdated and would never reach the enemy. The Russians know this; they are concentrating on missiles. Secondly, the cost is too great, and the money can better be utilized in other areas. And thirdly, no alternative uses exist that warrant mass programs of production. Slow orderly production might be okay, mainly for the purposes of research. But the mass production, crash program idea that would still take until 1970 to put the RB-70 into operational use is not desirable. Some might say that some military operations necessitate (sic) the use of manned bombers. This is true. We have plenty of B-52's and other bombers that are sufficient in this area. They might further say that the B-70 (sic) will provide America with a more flexible defense posture. This is not true. Missiles can be used in limited warfare or non-atomic warfare also and are faster and cheaper.

The idea of the RB-70 originated in 1950. It was suitable then, but not now. This is the missile age. Missiles are not obsolete for their primary purpose; manned bombers are. Missile development is better for the nation; bombers usurp funds that are needed in other areas. Missiles fulfill alternative uses also; bombers don't, especially in light of failure for primary purposes on top of this.

My solution: a crash program of missile perfection and production, along with, perhaps, slow development of manned bombers, mainly in the area of research. Thank you.

Second Speaker, "Low," Pro-"Crash Program

Well, I'm here to speak to you on a selected topic concerning the armed services, but at this early hour of the morning I'm no more in favor of a long, factual discussion than any one of you are (sic). But my day was brightened

considerably when Mr. Winters came up to me this morning before class and said, "Listen, Mike, I've got this little army story that I heard from Dr. Duns. Maybe you can use it." It seems there was this WAC corporal walking along a long, hot, dusty road one morning when she spied a little lake just surrounded by a grove of beautiful green trees. Well, the poor girl couldn't resist the temptation; she stripped off all her clothes and went in swimming. And she was having a wonderful time sun-bathing and swimming when all of a sudden she noticed an army sergeant walking down the road toward her. Well, the poor girl didn't know what to do, so she runs and made a dive for her clothes and just got the last button buttoned when the sergeant walked into the trees. But the man didn't pay any attention to her. He walked up to the edge of the lake, stood there and said, "Camouflage battalion, 'tention. Forward march!" Every tree around the lake walked off. But this has little to do with what I am to talk to you about.

Now that we're all awake I want to recall to your minds an old adage that we've all heard over and over: Never put all your eggs into one basket. Now, I'm pretty sure we can all agree on the validity of this statement; it's simply good, intelligent strategy for anyone. Here at Pacific you never see Coach Rhode take only eleven men to a football game. He knows he can rely on a reserve supply of diversified players to back him up. That way if, say, Wayman Hall was injured in a football game, the coach could always send in a substitute--maybe Tiny Campora--and we're ready to start again. Now this is an obvious and personal example of our old adage. Neither Coach Rhode nor any one of you puts all your eggs in one basket.

Now, what has this to do with my subject? Well, our strategy has been good so far. Why shouldn't it apply to our armed forces as well? By this I mean, why are we to depend solely on unmanned missiles such as the Titan, the Polaris, or the Atlas, all nuclear, inter-continental ballistics missiles, for our country's defense, when it is possible for us to have an entirely new and potent weapons system. I'm speaking of the RB-70 prototype bomber, the Valkyrie. This airplane amounts to nothing less than a fantastic breakthrough in the science of aerodynamics. Such a bomber, well no, call it a new weapons system, such a new weapons system can fly at speeds of two thousand miles per hour. Now that's more than three times the speed of sound. It will fly at an altitude of 70,000 feet, and have a range covering anywhere on the entire earth and back home again. Equipped with either atomic or non-atomic missiles, the RB-70 could frustrate any air-defense system yet developed or likely to be devised in

the near future. Now for centuries man has dreamed of a platform in the sky, a platform such as this, for a beginning for all his technological development.

Now, remember our adage, don't put all your eggs in one basket. Well, this is exactly what the opposers of the RB-70 crash program would have us do. We would rely, or we would be made, be forced to rely entirely on unmanned missiles for our defense. Never before in history have our defenses been so limited.

Now why do they want to stop the RB-70. Well they give us three basic reasons. First of all they tell us that manned bombers are said to be obsolete. Secondly, missiles make our best strike force. And third, by the time the RB-70 is in production it will be useless as a defensive weapon.

In answering the first objection, may I point out very seriously that in any major global conflict, such as war between the United States and Russia, even humanity perhaps would be obsolete. An all-out nuclear war has the potential of reducing our planet to a place of dead rock, and we all know it. Latest reports have shown that a 100-megaton bomb exploded over the Western United States at a 100 miles altitude has the capability of setting on fire, completely ablaze, five western states. The problems which we will have to contend with will be the small brush fire wars, such as the one currently in Vietnam, or others such as have broken out in Laos or Goa. Now we certainly cannot rely on a weapon that will wipe out the entire conflict area. That's like killing flies with a shot gun. What is needed is a quick striking, mobile force, able to move in, attack, and move out quickly. Now, doesn't that description sound familiar? The speed and the height of the 70 enable it to go anywhere in the world in three hours, penetrate before any warning, and get away at an altitude beyond detection of normal radar screens. This bomber can carry a full crew, actually faster than the proverbial speeding bullet, twenty-nine hundred feet per second.

Now, the second objection is that missiles make our best strike force. Well, I've already pointed out that in a limited war you simply cannot use nuclear missiles. But even if you could there are other problems. Who can be sure, or how can you be absolutely sure that a missile has hit its intended target? And if it does, who can say whether it will explode or not? Can you imagine this situation? We lost a rocket aimed at Moscow. Russia retaliates on New York. Just over Europe we find out our rocket is a dud. What's left?

A pile of tin on a Kremlin floor. A nuclear holocaust in New York. Any number of a thousand things can go wrong with a rocket from take-off to target. Why, just yesterday afternoon we taxpayers lost another bundle on an Atlas missile on the launching pad at Cape Canaveral basket.

Now, what I've been trying to emphasize all along is this: no missile has ever been invented that can ever replace the experience of a tactical commander. If and when that day comes, we might as well all go home and quietly die. I realize how much faith we Americans have in those mysterious little machines that seem to have all the answers. But just consider this. Has a machine ever been developed that can ask a simple critical question? Hardly. Man can never be replaced by a machine. This is not Orwell's 1984. This is America, today, in a critical cold war situation. Perhaps our whole future could depend on a short circuit in Florida. We could be destroyed or sent to war by a false alarm in California. All of us could be obliterated, because our armed forces chose to put all its eggs in one basket. Don't put your life on the line. Don't allow America's future security to rest on limited defense. Don't put all your eggs in one basket. Thank you.

DEBATE II

First Speaker, "Low," Anti-"Crash Program"

Let me begin by asking a question. Would any one of you go to a dual with an empty pistol simply because you thought there might be a possibility of some misunderstanding? I doubt it. But many of the supporters of the RB-70 program, as it was just described, feel quite honestly that one of the reasons for the RB-70 program is the fact that if there is a mistake the RB-70 can be called back. However, they fail to take into account that if there is no mistake, that if this is the real thing, that the RB-70 most probably will not even reach the target. So again I ask you the question, would any person go to a dual with an empty pistol simply because he thought there might be the possibility of a misunderstanding? I'm sure that the supporters of the RB-70 wouldn't; yet many of their arguments seem to take the same illogical bent. Quite often they're not based on empirical thought or even on common sense, as I think you'll see.

There is really no need for this crash program in the development of a large bomber, the nature of which is the

RB-70. If many of the congressmen who are pushing for defense contracts in their respective areas would just leave off of (sic) a little of this pressure, if some of the air force officers, for example, would simply not be so concerned about the fact that the air force might lose some of its present status in the armed forces system, if there might be a little more recognition in responsible circles that we're moving into a new and different era, then I think all this needless haggling in Congress, all this needless waste of money, and there is a needless waste of it, and all this needless waste of time and energy in the development of an obsolete weapons system simply would not be necessary. Rather we should use this time, energy, and money for the development of what many authorities feel is the weapons system of the future, namely the missile system.

Now, what are some of the arguments used by the supporters of the RB-70, arguments which they think are convincing enough that we should go into a crash program of its development?

First, and as already mentioned in this little introduction, they feel that human decision is so valuable that it is more important by far than any mechanical system. Now, I would agree with them wholeheartedly. But something needs to be recognized in terms of the RB-70 or any manned aircraft. Human decision, once it has been made, has to be carried out, and, as we'll see in just a moment, the RB-70 is not an effective enough weapon to carry out human decision. Now even if it was, the missile system, the mechanical system to which they refer, is not as faulty as they would seem to indicate that it is. General White, an air force general, a man who is really against the missile system, himself has to agree that a faulty weapons system is not an occurrence which often takes place. If it is a faulty weapon, or if there is a mistake in the launching of a particular missile, it can be destroyed instantaneously. And as far as the missile landing on the target area, General White, himself, admits that it can land with the chances of a thousand to one, and that it will land within a close prediction of where the target was intended.

Well, another reason, and this is again quite important, I think, if we analyze it, is the fact that the RB-70, so the supporters say, also can be used for limited war. In other words, the time may come when atomic warfare is limited, when it is maybe even outlawed. But even so, the RB-70 will be useful because it can be used in limited warfare. Well, I would just ask the question, of what value is a plane whose

effectiveness is only in the fact that it can fly at two and a half times the speed of sound and at altitudes far above 50,000, 60,000 feet, of what value is a plane like this going to be in a war over South Vietnam and a war over South Korea? I think we can see it's going to have limited effectiveness. It's value is high speed and high altitude, and high speeds and high altitudes are going to be of no value in a limited war in Southeast Asia or wherever it might be.

Another reason advanced by the supporters of the RB-70, and probably the most important reason, is the fact that they say that here we're going to have a more diversified aircraft, a more diversified striking force, a striking force with greater power behind it. Now, this is really the crux of their argument, but I think if we take a close look at it we'll see that this is really not the case. Now, why is the effectiveness of the RB-70 limited? Most important, and it's extremely important, is the rapid development that's taken place in recent years, and particularly in the last two or three years, in the defense systems of each of the Soviet Union and the United States. Now, keep in mind that the RB-70 would not be able to go into full, productive use until 1969; this is the earliest date, 1969. This is an estimate given by General LeMay of the armed forces. However, right now in 1962, it is estimated by the United States Defense Command, that if one hundred RB-70's were sent over the Soviet Union, only five of them would get through to their targets--five out of a hundred. An even more discouraging estimate is given by Colonel Maharis, who is Defense Chief of the New York City area. He said if the United States, or anybody, sent over one hundred bombers over New York, his defense system would allow one out of the one hundred to reach the target. This is in 1962.

Now why is this basically the case? Why has the defense system developed so rapidly? Because, essentially, of one new weapon. That is the anti-aircraft missile that uses the infra-red technique; in other words, it homes in on the heat, the exhaust, of the jet itself. Now, the interesting thing is that the RB-70 does not only have the exhaust upon which these infra-red missiles can strike but, by the fact that it's travelling at 2,000 miles per hour, creates enough friction so that every part of its entire body is hot enough that it can attract any missile that it wants to. Now, if any of you would doubt the effectiveness of the Soviet Union using these infra-red missiles as a defense system, then I suggest you ask Gary Powers about it. I think he can attest to the fact that they can use these infra-red missiles quite effectively. It's simply the fact remains

that no matter how fast the plane is flying, an infra-red anti-aircraft missile, even as they've developed to this point in 1962, can be used effectively in its defense. And the question must be raised, what is going to take place in the next seven years, the seven years in which the RB-70 is going to get supposedly off the drawing table into full, productive use. I'm sure the Soviet Union in the mean time can find the means by which to develop an anti-aircraft missile of a greater nature that will be able to eliminate the remaining five planes or the remaining one plane, whatever the aircraft might be.

Another factor that has to be taken into account limiting the effectiveness of these RB-70's, simply in terms of reaching its target, is the time factor. It takes the RB-70 at least two hours to reach its target, if the speeds can be created as they are on the drawing table at this time. Now, the missile system itself takes at a minimum time fifteen minutes. Now, if we just estimate the times here, this would allow the Soviet Union, for example, to launch at least three additional missile waves in the time it would take the RB-70 to reach its target, assuming--this is a very important assumption--that it could even reach the target to begin with.

And then one last factor that I'm sure we're all interested in--if not, we will be in a few years--is the cost factor. General LeMay estimates that already one million dollars has been spent on the RB-70, and it hasn't even gotten off the drawing boards. And he further goes on to say that by the time we could put the RB-70 into full, productive use, in other words by 1969, we're going to have spent at least, the minimum, of ten billion dollars. Now he suggests, and I think many other authorities in the field of military science suggest, that we spend this money, if we have to, on a weapons system that belongs in the correct era, namely the missile system itself. There is no need to waste this money and the energy that goes along with it. We can put it to more effective use on the missile system.

I think you can see totally, then, that the arguments for the RB-70 are not sufficiently strong to justify developing a crash program in this field. On the other hand, the effectiveness of it is extremely limited. In terms of all-out war, its effectiveness is almost nill. The time factor must be considered, as well as the cost factor. Maybe the best policy is the one suggested by the Defense Department, to grant simply one hundred and eighty million dollars to develop and build two prototypes of the RB-70, test these, observe them in the next five or six years. If we find that we need to develop the RB-70, which I doubt very much, then we could go immediately into full, productive use of them.

There simply is no need for a crash program in the RB-70. As General Miller of the Strategic Air Command said, if we're going to appropriate money for a 1943 war, fine, but we're not fighting a 1943 war, so let's not have a 1943 weapons idea.

Second Speaker, "High," Pro-"Crash Program"

About a quarter of a century ago--that would make it about 1937--there was a hot military controversy waging in Washington. The times were very similar to those we have today; we realized that we were soon in all probability going to be entered into a war, and a war in a new field, the field of air. We'd had war on the sea and in the land before, but for the first time we moved into the air. And this controversy was over the development of new methods of fighting a war in the air. It is fortunate for us that the proponents of the new methods won this time. For what they proposed was the B-17, one of the most deadly weapons developed in the early part of the second World War and one of the main reasons that we were not crushed by the Japanese after Pearl Harbor.

Today we are faced with a similar choice. We have now moved from the war of the air, we are told, to the war of space. And in this war some systems have become obsolete. And we are told by proponents of rocketry that the airplane is gone, its day is over, and what we need now is to concentrate all of our eggs on the development of powerful new rockets. Well, I would contend that today perhaps we should do the opposite of what we did in 1937; we should listen to the men who back the status quo, who contend that the best hope for the future in the air and in space is the development of mobile, highly maneuverable manned airplanes, rather than total concentration of rockets. The plane that I am talking about is the RB-70; it was the B-70, quite recently changed to RB-70, stands for Reconnaissance Bomber. It's not a fly-by-night scheme; it's not an idea that was developed over night. It's an idea that has been working in the minds of military men since 1950. In 1950 the Korean War began. We realized we were already approaching a new age in the air, and we realized that we needed new weapons to fight global warfare. And what we needed was a large, fast bomber, which not only had two or three times the speed of a B-52 but which also could climb higher, faster, go farther with greater pay load than any plane that we had at that time.

Let's look at the specifications that were drawn up for this fantastic vehicle of space, or air. Number one, it flies at mock three, a speed of two thousand miles per hour, three

times faster than the B-52, the airplane on which most arguments for rockets are based. Rocketry men say, "Look how slow the airplane is; it'll never compete with the rocket. We have to have rockets." It has inter-continental range; it can go to any part of the world, deliver a pay load, and return, something that a rocket cannot do. It flies at seventy to eighty thousand feet, three times as high as the average B-52, on a regular flight; and has a pay load equivalent to that of the old B-36, 25,000 pounds, many times what a B-52 can easily carry. Finally, it utilizes one of the biggest advantages of the rocket; it has inertial and celestial navigation equipment, radar and bomb sights all linked together, which give it the directional ability of a rocket. But the RB-70 has one advantage that no rocket can ever have; that is, the advantage of a man, because it is flown by man in the cock-pit, not by man by remote control.

But you say, what are the advantages to this? We just heard an argument for rockets. Why should we have a B-70? Why should we plow millions of dollars into this area, rather than continuing with our development of the rocket industry? General Harold Hapart, Director of Special Planning for the War College, has this to say, "No missile likely to be invented can destroy a target and return to its base, and that's just what a manned bomber can do. It's not enough that you know you can hit your target, obviously rockets can do this; command headquarters need much more. What military movements are on evidence in the enemy heartland is important. Also, what are the anti-aircraft defenses like? What was the extent of the damage to the target area? (Did the rocket, for instance, fall on the target area, or did it fall ten miles off?) In fact, we cannot see anyway that we can plan a second strike strategy intelligently," says this general, "unless there is some way we can learn how the first strike worked, and it seems to me that the RB-70 is the only way that we can do that."

Here is the advantage, then. In the first place, the RB-70, with a man at the controls, with its speed, with its ability to deliver rockets from the air, can determine for us by on-the-site observations whether we need to launch second, third, and fourth attacks with ICBM's if we use the mixed system, or with more RB-70's if we use this system. This means that we can save enemy life. It means that we can save valuable enemy property. It means that we can save our own expenses in a war. For we know what the enemy is planning to do. We can see his troop movements if he plans to follow up an ICBM attack with troops. We know what damage we have inflicted upon him, so that we do not need to cause

needless bloodshed in a war of the future. It means that we can be prepared for return strikes, for we know whether the enemy is coming back at us after our second attack, assuming that we were attacked first. And it means that we can recall our planes if there is a mistake; this is something that you cannot do with a rocket. A rocket is final. If we make a mistake when that little red telephone rings in Washington, then it's all over for us with the rockets. It's total war; not true with the B-70.

General Carl Space, former Air Force Chief of Staff, says that there is another advantage to the B-70, and that's its ability to adapt, because with a rocket the only effective use for war is with a nuclear warhead. It cannot carry enough explosives of another nature to be practical. But with the RB-70 we have a very fast, effective, heavy pay load bomber, which can deliver conventional warheads to remote areas in brush fire wars, without having to resort to nuclear attack. Not only this, but it can also be converted to transport troops, something that no rocket can do. Imagine this. Because of the speed, if right now at 8:30 a.m., Pacific Standard time, the Chinese Communists were to start for Formosa at ten knots per hour, in their little junks or whatever, and we were to send RB-70's from the United States, the RB-70's would be there over the Formosa Straits with bombs or troops before the Chinese Communists had gotten half-way to the island of Formosa.

And finally, then, briefly, there is another advantage to the RB-70. Because it gives us a versatility that the Russians at this time do not have, although we realize that they are striving for it at the present time, we can have a mixed arsenal. The RB-70 goes into the air, fires a Sky Bolt rocket, which has the same effect as an ICBM, but the RB-70 can go in, can check the target. It can do the same thing if ICBM's are launched first and the RB-70's are used merely for reconnaissance. Thus we can know what we are doing. We have eyes here where the bombs have hit, an advantage of mobility that we do not have at the present time. Right now we have committed ourselves to one method of warfare, which we admit is total warfare. We have not provided for brush fire wars. We have not provided for mistakes in the Strategic Air Command, which could put us into a war that nobody wanted. And we have not provided for the possibility that the Russians are using more versatile methods than are we ourselves.

The advantages of the RB-70, then: it is supplementary, it is adaptable, and it has the ability to think, an ability which can save lives, can save property, can save needless war--an ability which cannot be built into the mechanism of any nuclear rocket.

APPENDIX E

SUMMARY OF DATA FROM "SEMANTIC DIFFERENTIALS" OF DEBATE I

AND

MATRIX OF SIGNIFICANCE OF DIFFERENCES BETWEEN "MEAN SPEAKER
SEMANTIC DIFFERENTIAL SCORES" OF DEBATE II

TABLE XXIX

SUMMARY OF R. B. 70 SEMANTIC DIFFERENTIAL RESULTS, DEBATE I

Item	Q 1 Voting for "Low" (N=18)	Q 4 Voting for "Low" (N=18)	Q 4 Voting for "High" (N=4) (N=4)
1. Effective- Ineffective	5.44	5.89	3.25
2. Invulnerable- Vulnerable	3.71	4.06	2.00
3. Timely- Obsolete	4.83	5.29	2.50
4. Powerful- Weak	5.50	7.11	5.00
5. Hard- Soft	5.06	5.41	4.75
6. Aggressive- Defensive	4.67	4.67	4.50
\bar{X}	4.88	5.41	3.63

TABLE XXX

SUMMARY OF "SPEAKER SEMANTIC DIFFERENTIALS," DEBATE I

Item	First Speaker "High"			Second Speaker "Low"		
	Q 1	Q 4	Q 4	Q 1	Q 4	Q 4
	Voting for "Low" (N=19)	Voting for "Low" (N=18)	Voting for "High" (N=4)	Voting for "Low"	Voting for "Low"	Voting for "High"
Logical- Illogical	5.16	4.83	4.00	5.21	6.47	4.25
Believable- Unbelievable	4.90	4.78	5.75	5.94	6.38	4.50
Convincing- Unconvincing	3.74	3.39	5.50	6.11	6.61	3.25
Factual- Emotional	5.63	5.72	5.50	3.74	3.56	3.00
Lucid- Obscure	5.11	4.28	5.50	5.74	5.78	5.00
Aggressive- Defensive	4.32	4.18	5.50	5.90	5.11	5.25
Strong- Weak	4.05	3.88	5.50	5.84	6.28	5.50
Open-Minded Dogmatic	4.05	3.61	3.75	4.11	4.72	4.00
Likable- Repulsive	4.68	4.61	5.25	6.26	6.22	5.25
Like Me- Unlike Me	3.26	2.61	4.25	3.95	4.83	2.75
\bar{X}	4.49	4.19	5.25	5.27	5.59	4.28

TABLE XXXI

SIGNIFICANCE OF DIFFERENCES BETWEEN "MEAN SPEAKER
SEMANTIC DIFFERENTIAL SCORES" DEBATE I*

Speaker		"Low"				"High"			
As Per- ceived by		Q 1	Q 4	Q 1	Q 4	Q 1	Q 4	Q 1	Q 4
		v.f. "Low"	v.f. "Low"	v.f. "High"	v.f. "High"	v.f. "Low"	v.f. "Low"	v.f. "High"	v.f. "High"
L O W	Q 1 v.f. "Low"		xx .58	.86	.37	xxx 1.32	xxx 1.12	.48	.01
	Q 4 v.f. "Low"			.28	.21	x .74	.66	.10	.59
	Q 1 v.f. "High"				.48	.46	.26	.38	xx .87
	Q 4 v.f. "High"					xx 1.05	x .75	.11	.38
H I G	Q 1 v.f. "Low"						.20	xx .84	xxx 1.33
	Q 4 v.f. "Low"							.64	xxx 1.13
	Q 1 v.f. "High"								.49
H'	Q 4 v.f. "High"								

x = .10 xx = .05 xxx = .01

*Table should be read in the following fashion:
Scores in the upper-right hand section should be read horizontally across the inked line. Scores in the upper-left and lower-right hand sections should be read within the inked lines.

APPENDIX F

PRE- AND POST-DEBATE QUESTIONNAIRES

Put your number here _____

GENERAL INFORMATION SHEET

1. _____ The present Secretary of Defense is:
 - a. Charles E. Wilson
 - b. E. L. Whittie
 - c. Robert McNamara
 - d. Christian Herter
2. _____ The present Chairman of the Joint Chiefs of Staff is:
 - a. Curtiss LeMay
 - b. Lionel Lemnitzer
 - c. Charles Radford
 - d. Walter Reuther
3. _____ The plane which immediately preceded the B 47 and B 52 as the backbone of S.A.C.
 - a. B 36
 - b. B 29
 - c. B 51
 - d. B 30
4. _____ A long time champion of the U.S. Air Force in the U.S. Senate is:
 - a. Senator Eastland
 - b. Senator Capeheart
 - c. Senator Claighorn
 - d. Senator Symington

The next question concerns the question which you will hear discussed today. Please mark the answer which comes nearest to your opinion.

5. _____ The best policy to follow in relation to the RB 70 is:
 - a. A crash program to ready the plane for production
 - b. Continue the present development program
 - c. I am familiar with the issue but have no opinion
 - d. I am not familiar with the issue

Put the number which appeared next to your name on the roll sheet here: _____

DEBATE BALLOT

1. I cast my vote for: (Check one no ties allowed.)
 The first speaker _____
 The second speaker _____
2. Give a letter grade (A,B,C,D, or F) to each speaker.
 _____ The first speaker
 _____ The second speaker
3. Briefly state the reason for your decision and the grade you gave the speakers.
4. Check the statement nearest your attitude
 _____ Agree strongly with first speaker
 _____ Agree moderately with first speaker
 _____ Agree mildly with first speaker
 _____ Agree mildly with second speaker
 _____ Agree moderately with second speaker
 _____ Agree strongly with second speaker

The next three questions use a device designed to allow you to express degrees of opinion. This method, known as the "Semantic Differential" works as follows: You are given a word such as apple, and then are presented with a series of paired opposites which you compare to the given word. For instance let us assume the word was "apple."

APPLE

Sweet _____:_____:_____:_____:_____:_____:_____: Sour
 Delicious _____:_____:_____:_____:_____:_____:_____: Awful

You will notice that there are seven blanks. If we assume that the middle blank stands for a natural position then you can see that the more you move to the left, the more you think of apples as sweet or delicious. Conversely the more you move to the right the more you would think of apples as being sour. Thus if you thought of apples as being very sweet you would probably mark your question like this:

Sweet ____:____:____:____:____:____:____: Sour

If you had only eaten very green apples you would mark the other end of the scale. Notice that these extreme positions are not the only ones possible. Considering the second item above, perhaps you don't consider apples as "awful" but on the other hand you really don't like "an apple a day." In this case you might mark this item like this.

Delicious ____:____:____:____:____:____:____: Awful

Thus you can see that the "Semantic Differential" allows you to respond to a word in a number of ways. You are not confined to only one of two possible answers.

Please keep two things in mind as you answer the following questions.

1. Respond to all of the items.
2. Mark directly over the lines, not between them.

This, x :____:, not this, ____x____:

THE R.B. 70

1. Effective ____:____:____:____:____:____:____: Ineffective
2. Invulnerable ____:____:____:____:____:____:____: Vulnerable
3. Timely ____:____:____:____:____:____:____: Obsolete
4. Powerful ____:____:____:____:____:____:____: Weak
5. Hard ____:____:____:____:____:____:____: Soft
6. Aggressive ____:____:____:____:____:____:____: Defensive

THE FIRST SPEAKER

1. Logical _____:_____:_____:_____:_____:_____:_____: Illogical
2. Believable _____:_____:_____:_____:_____:_____:_____: Unbelievable
3. Unconvincing _____:_____:_____:_____:_____:_____:_____: Convincing
4. Factual _____:_____:_____:_____:_____:_____:_____: Emotional
5. Lucid _____:_____:_____:_____:_____:_____:_____: Obscure
6. Aggressive _____:_____:_____:_____:_____:_____:_____: Defensive
7. Strong _____:_____:_____:_____:_____:_____:_____: Weak
8. Dogmatic _____:_____:_____:_____:_____:_____:_____: Open-Minded
9. Likable _____:_____:_____:_____:_____:_____:_____: Repulsive
10. Like me
(Exclude sex) _____:_____:_____:_____:_____:_____:_____: Unlike me

THE SECOND SPEAKER

1. Logical _____:_____:_____:_____:_____:_____:_____: Illogical
2. Believable _____:_____:_____:_____:_____:_____:_____: Unbelievable
3. Unconvincing _____:_____:_____:_____:_____:_____:_____: Convincing
4. Factual _____:_____:_____:_____:_____:_____:_____: Emotional
5. Lucid _____:_____:_____:_____:_____:_____:_____: Obscure
6. Aggressive _____:_____:_____:_____:_____:_____:_____: Defensive
7. Strong _____:_____:_____:_____:_____:_____:_____: Weak
8. Dogmatic _____:_____:_____:_____:_____:_____:_____: Open-Minded
9. Likable _____:_____:_____:_____:_____:_____:_____: Repulsive
10. Like me
(Exclude sex) _____:_____:_____:_____:_____:_____:_____: Unlike me